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93599

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Hong Liu Examiner #: 77011 Date: 5/8/03

Art Unit: 1624 Phone Number 30 6-5814 Serial Number: 09/954,631

Mail Box and Bldg/Room Location: 4601 Results Format Preferred (circle): PAPER DISK E-MAIL

4612

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

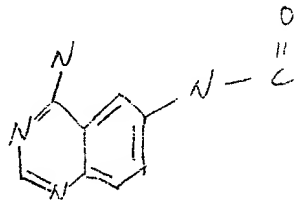
Title of Invention: _____

Inventors (please provide full names): Himmelsbach F Langkopf E Jung B Blech S Salca F

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Barb please



Point of Contact:
Barb O'Bryen
Technical Information Specialist
STIC CM1 6A05 308-4291

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STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: Connie	NA Sequence (#)		STN	24 hr
Searcher Phone #:	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)	1	Questel/Orbit	
Date Searcher Picked Up:	Bibliographic		Dr.Link	
Date Completed: 5-12-03	Litigation		Lexis/Nexis	
Searcher Prep & Review Time: 30	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	
Online Time: 25	Other		Other (specify)	

PTO-1590 (8-01)

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rch Results
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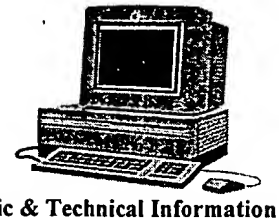


Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please contact ***the BioTech-Chem searcher*** who conducted the search ***or contact***:

Mary Hale, Supervisor, 308-4258
CM-1 Room 1E01

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* *(Example: 1610)*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found**:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms at the **Circulati n Desk CM-1,** or send to Mary Hale, **CM1-1E01 or e-mail mary.hale@uspto.g v.**

=> fil reg; d stat que l30; fil capl; d que nos l31; fil uspatf; d que nos l32
FILE 'REGISTRY' ENTERED AT 11:05:11 ON 12 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 MAY 2003 HIGHEST RN 514167-89-6
DICTIONARY FILE UPDATES: 11 MAY 2003 HIGHEST RN 514167-89-6

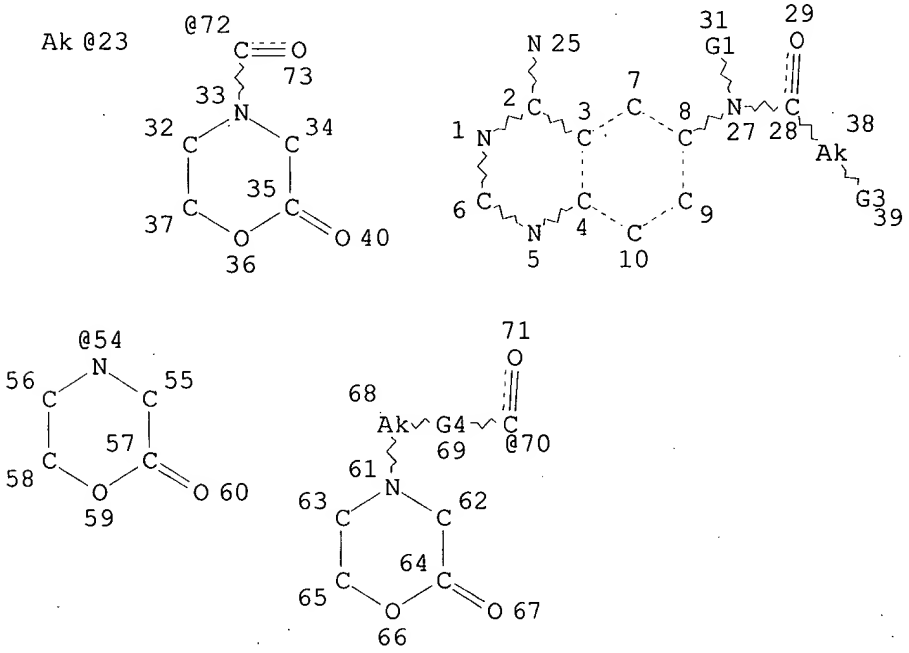
TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

L28 STR



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CONNECT IS E1 RC AT 23
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 38
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 45

STEREO ATTRIBUTES: NONE
L30 46 SEA FILE=REGISTRY SSS FUL L28

100.0% PROCESSED 71 ITERATIONS 46 ANSWERS
SEARCH TIME: 00.00.02

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 12 May 2003 VOL 138 ISS 20
FILE LAST UPDATED: 11 May 2003 (20030511/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

L28 STR
L30 46 SEA FILE=REGISTRY SSS FUL L28
L31 3 SEA FILE=CAPLUS ABB=ON L30

FILE 'USPATFULL' ENTERED AT 11:05:11 ON 12 MAY 2003

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 May 2003 (20030508/PD)
FILE LAST UPDATED: 8 May 2003 (20030508/ED)
HIGHEST GRANTED PATENT NUMBER: US6560778
HIGHEST APPLICATION PUBLICATION NUMBER: US2003088899
CA INDEXING IS CURRENT THROUGH 8 May 2003 (20030508/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 8 May 2003 (20030508/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2003

>>> USPAT2 is now available. USPATFULL contains full text of the original, i.e., the earliest published granted patents or applications. USPAT2 contains full text of the latest US publications, starting in 2001, for the inventions covered in USPATFULL. A USPATFULL record contains not only the original published document but also a list of any subsequent publications. The publication number, patent kind code, and publication date for all the US publications for an invention are displayed in the PI (Patent Information) field of USPATFULL records and may be searched in standard search fields, e.g., /PN, /PK, etc. <<<

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>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to         <<<
>>>  enter this cluster.                                               <<<
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>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from     <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.


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L32           2 SEA FILE=USPATFULL ABB=ON  L30


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FILE 'CAPLUS' ENTERED AT 11:05:18 ON 12 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPATFULL' ENTERED AT 11:05:18 ON 12 MAY 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)
PROCESSING COMPLETED FOR L31
PROCESSING COMPLETED FOR L32
L34             5 DUP REM L31 L32 (0 DUPLICATES REMOVED)
                  ANSWERS '1-3' FROM FILE CAPLUS
                  ANSWERS '4-5' FROM FILE USPATFULL

=> d ibib abs hitstr 1-5; fil cao; d que nos l33; fil hom

L34  ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2002:171892  CAPLUS
DOCUMENT NUMBER:          136:216762
TITLE:                    Preparation of 4-amino-6-heterocyclylcarbonylaminoquin
                          azolines as epidermal growth factor receptor signal
                          transduction inhibitors
INVENTOR(S):              Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit;
                          Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S):       Boehringer Ingelheim Pharma Kg, Germany
SOURCE:                   PCT Int. Appl., 53 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

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OTHER SOURCE(S): MARPAT 136:216762
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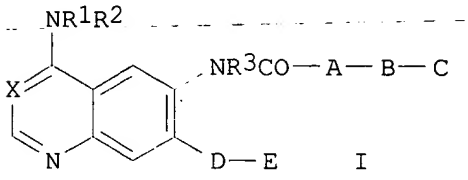

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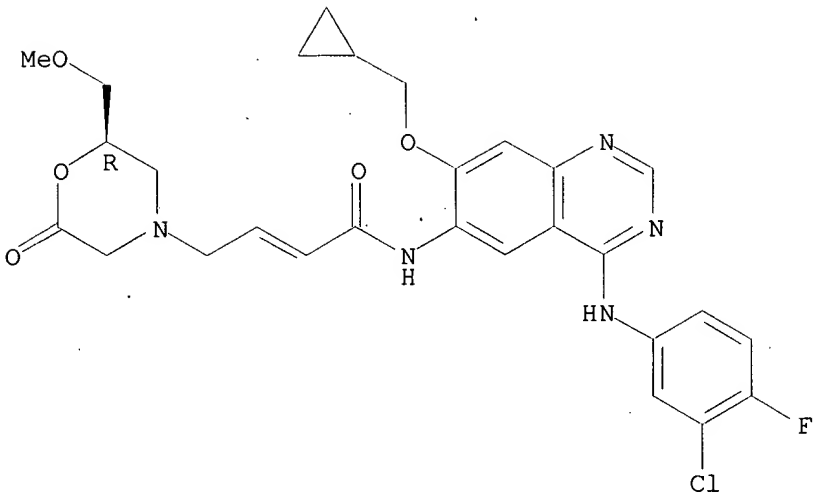
AB Title compds. [I; X = N, (substituted) methynyl; R1 = H, Me; R2 = (substituted) Ph, PhCH2, 1-phenylethyl; R3 = H, Me; A = (substituted) vinyl, ethynyl, 1,3-butadien-1,4-yl; B = (substituted) alkenyl, alkenylcarbonyl, etc.; C = (substituted) 2-oxomorpholin-4-yl, etc; D = oxyalkenyl, O; E = (substituted) amino, alkenylimino, imidazolyl, cycloalkyl; or DE = H, (substituted) alkoxy, etc.], were prepd. Thus, 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(ethoxycarbonylmethyl)-N-((R)-2-hydroxy-3-methoxypropyl)amino]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline (prepn. given) and MeSO2OH in MeCN were stirred for 4 h under reflux to give 69% 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[(R)-2-methoxymethyl-6-oxomorpholin-4-yl]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline. The latter inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 2 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.
IT **402569-98-6P 402569-99-7P 402570-00-7P**
402570-01-8P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of (amino)(heterocyclylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)
RN 402569-98-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



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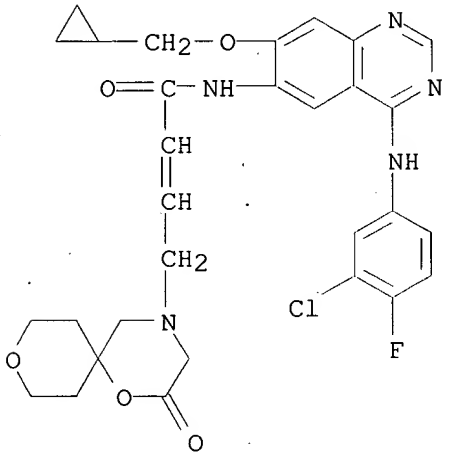

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RN 402570-00-7 CAPLUS
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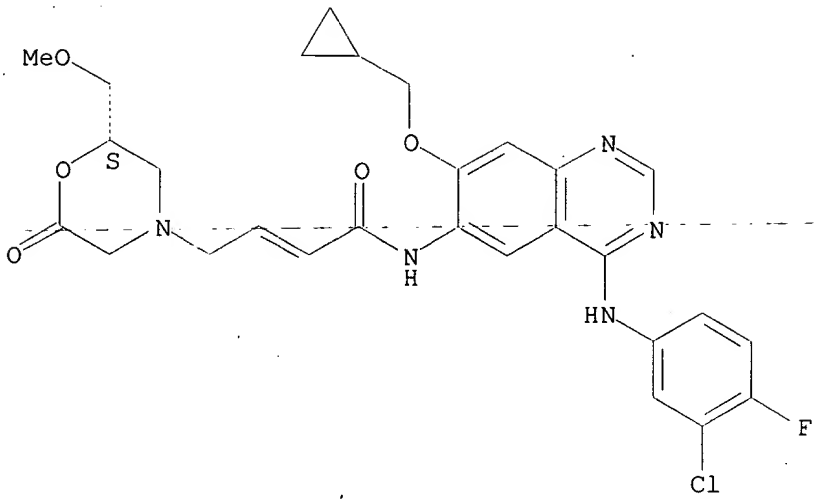
Absolute stereochemistry.
Double bond geometry unknown.



RN 402570-01-8 CAPLUS
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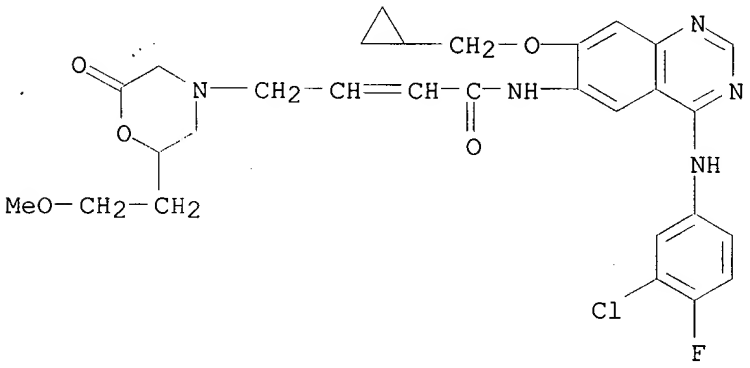

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L84 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:171889 CAPLUS
DOCUMENT NUMBER: 136:232315
TITLE: Preparation of 4-amino-6-vinylcarbonylaminoquinazolines as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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US 2002077330 A1 20020620 US 2001-929931 20010815
AU 2001084021 A5 20020313 AU 2001-84021 20010818
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US 2000-230389P P 20000906
WO 2001-EP9537 W 20010818
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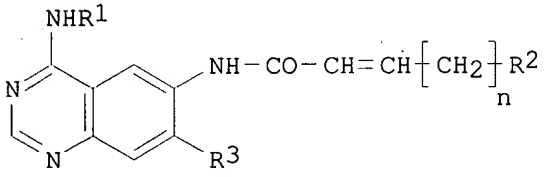
GI



I

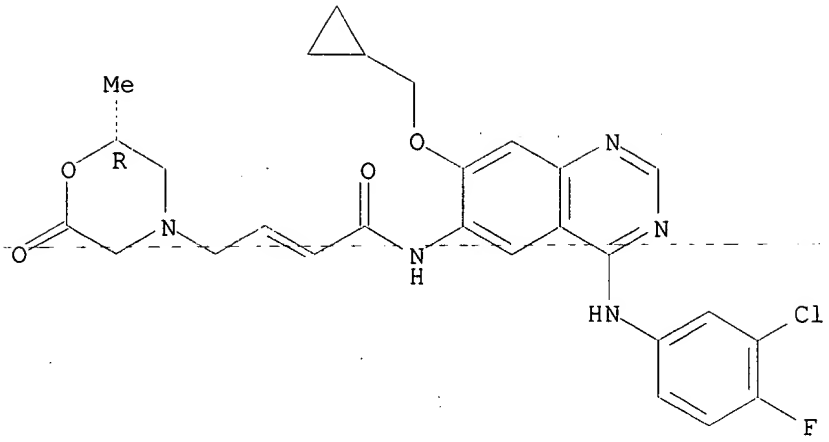
AB Title compds. [I; R1 = PhCH2, 1-phenylethyl, (substituted) Ph; R2 = N-[(1,3-dioxolan-2-yl)methyl]methylamino, (substituted) R4OCOCH2NCH2CH2OH, 2-oxomorpholin-4-yl; R4 = H, alkyl; R3 = H, (alkoxy)alkoxy, cycloalkylalkoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy; n = 1-3], were prepd. Thus, a mixt. of 6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-cyclopropylmethoxyquinazoline (prepn. given) and disopropylethylamine in THF was dropwise treated under ice-cooling with BrCH2CH:CHCO2Cl (prepn. given) in CH2Cl2 followed by stirring for 1 h under ice-cooling and for 2 h at room temp. and addn. of (S)-(2-hydroxypropylamino)acetic acid tert-Bu ester in CH2Cl2 to give after stirring over night at room temp. and stirring for 5 h at 60.degree. 64% 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(tert-butyloxycarbonylmethyl)-N-((S)-2-hydroxyprop-1-yl)amino]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline. Several I inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 0.02-15 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

IT **402855-53-2P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402855-53-2 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



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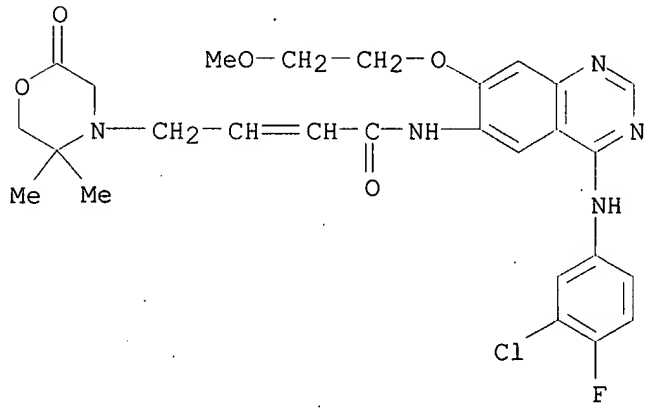
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402855-19-0 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(2-methoxyethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



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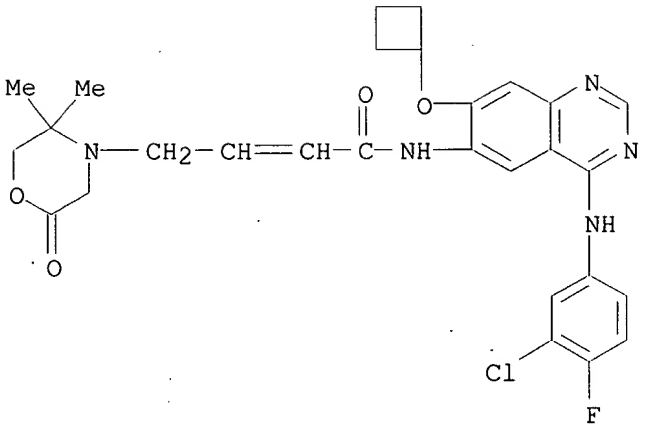

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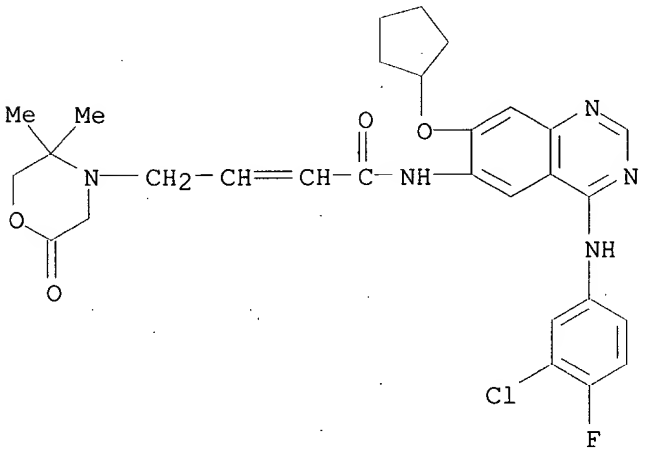

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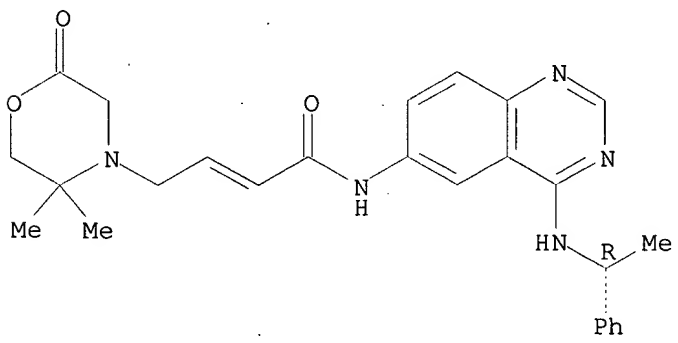
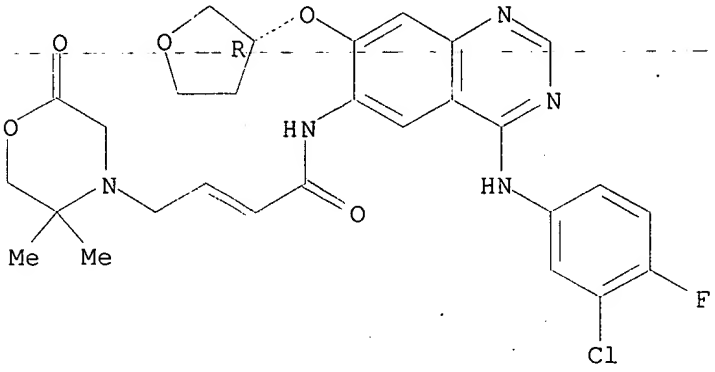
Absolute stereochemistry.
Double bond geometry unknown.



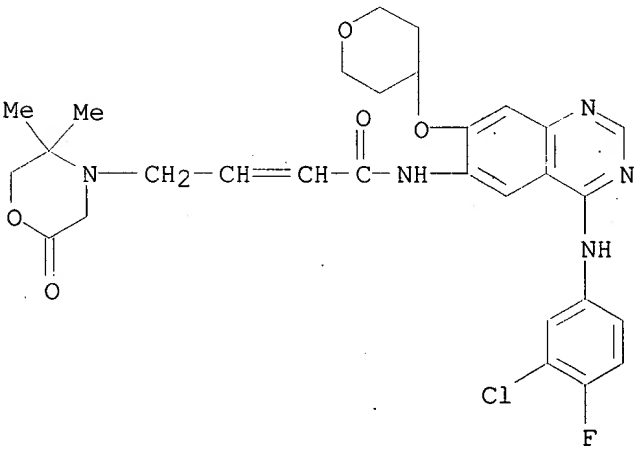
RN 402855-25-8 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

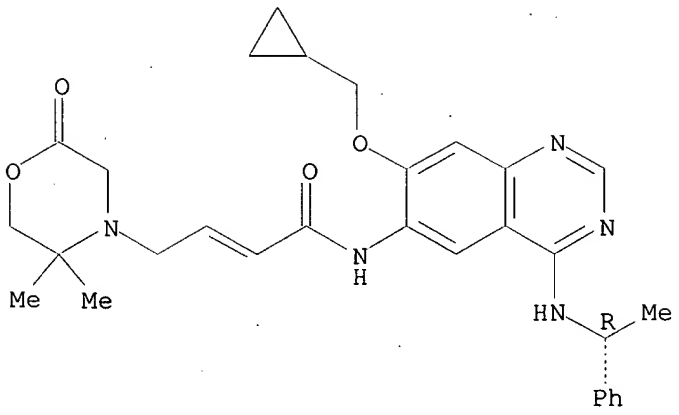


RN 402855-29-2 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

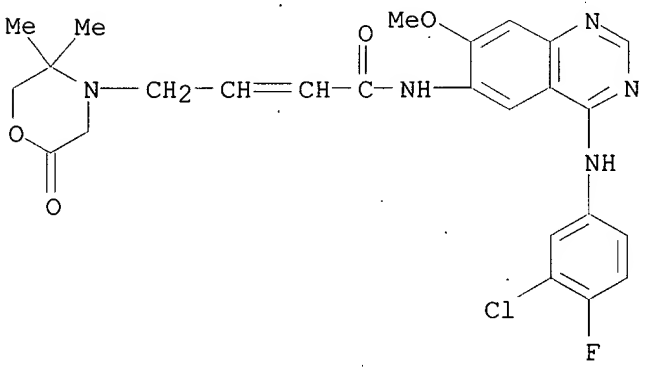


RN 402855-30-5 CAPLUS
CN 2-Butenamide, N-[7-(cyclopropylmethoxy)-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

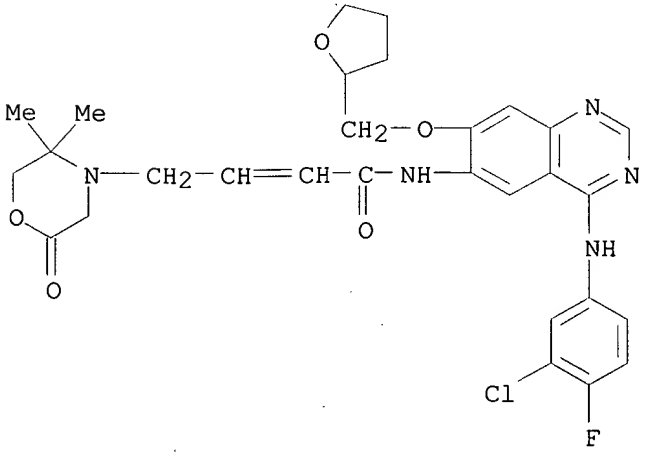
Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-32-7 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



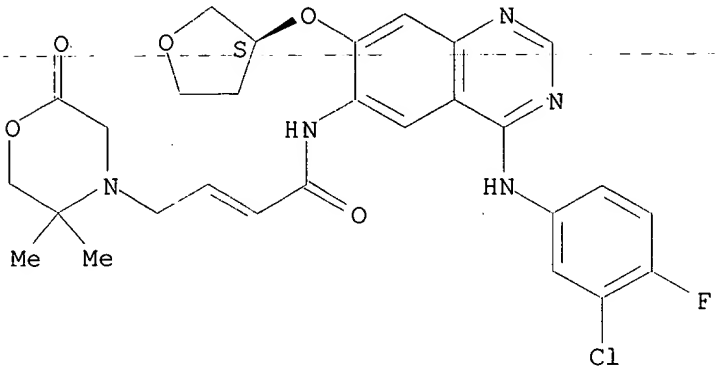
RN 402855-33-8 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



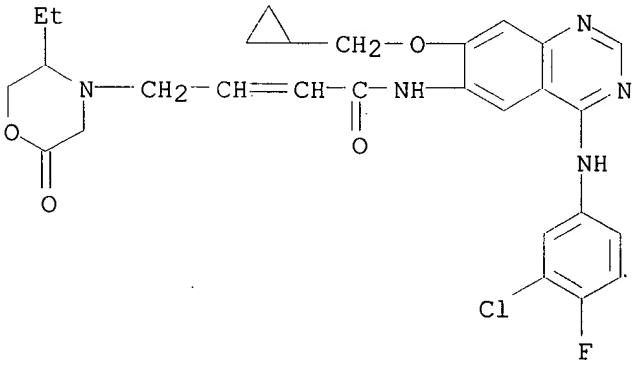
RN 402855-34-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

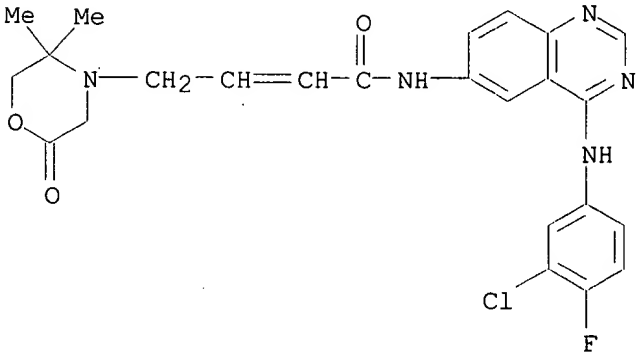
Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-35-0 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-ethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

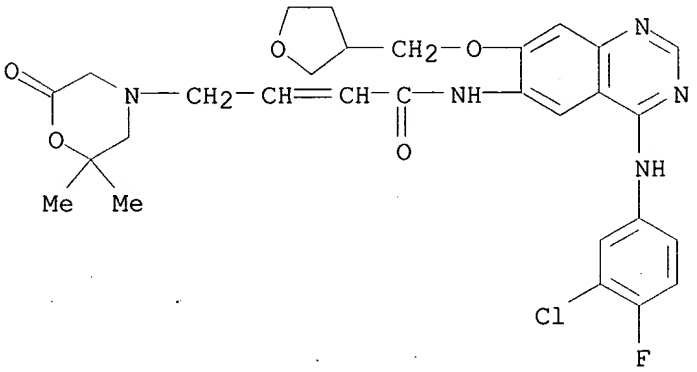


RN 402855-38-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

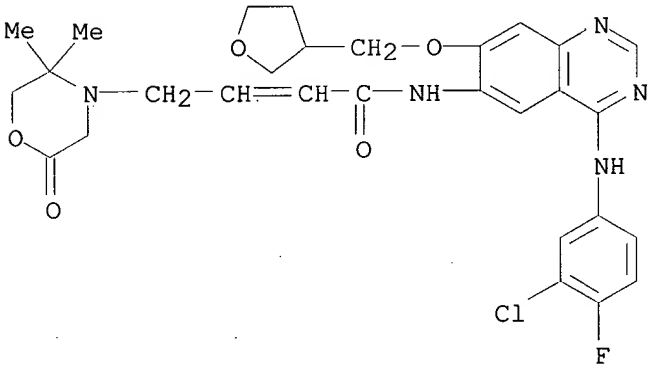


RN 402855-47-4 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

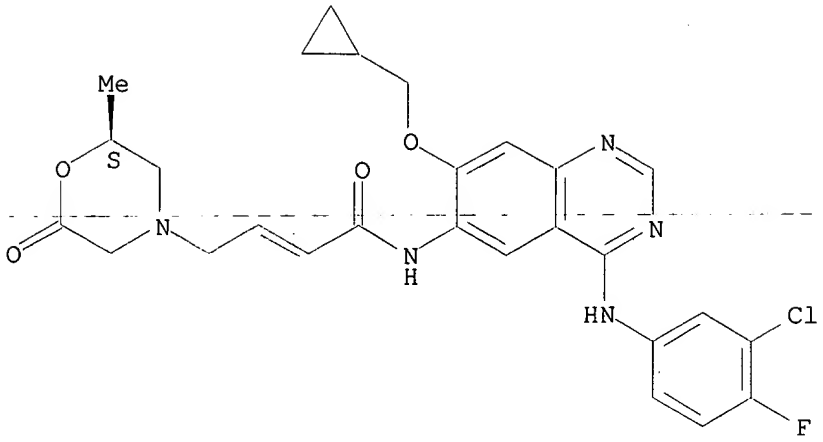


RN 402855-48-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



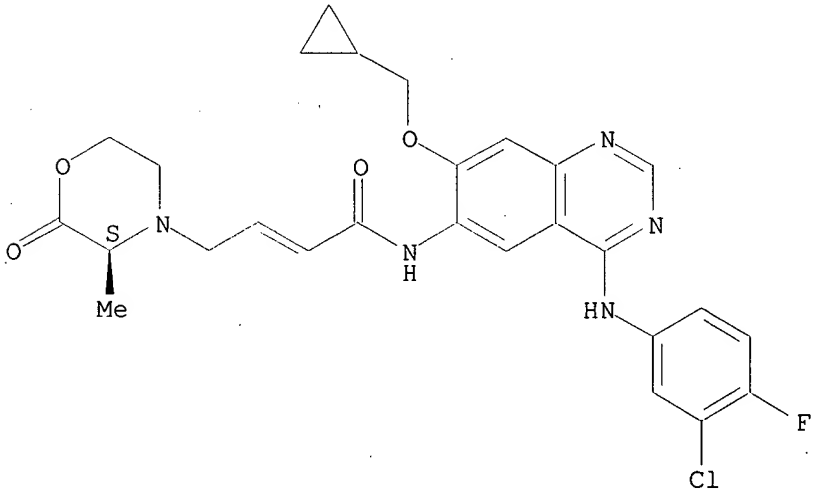
RN 402855-52-1 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



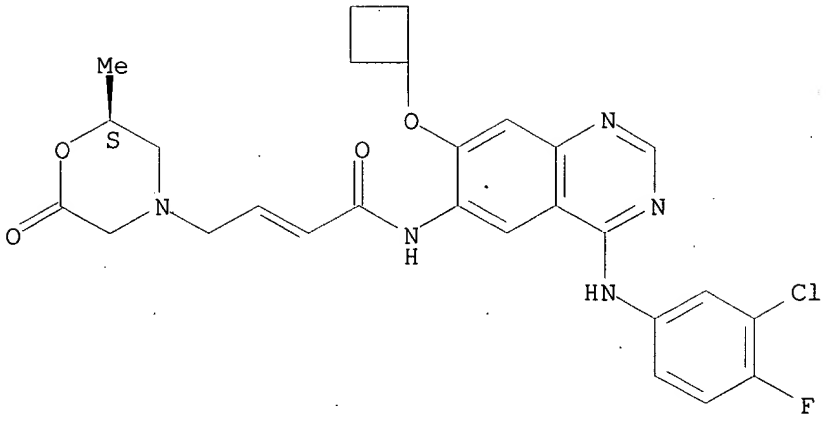
RN 402855-54-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(3S)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



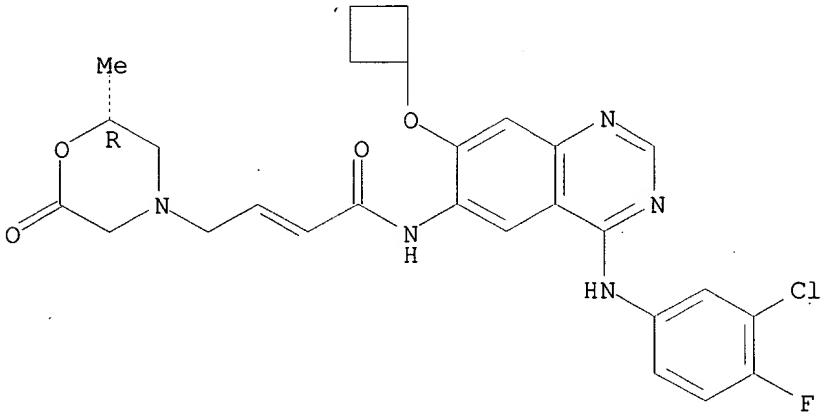
RN 402855-55-4 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



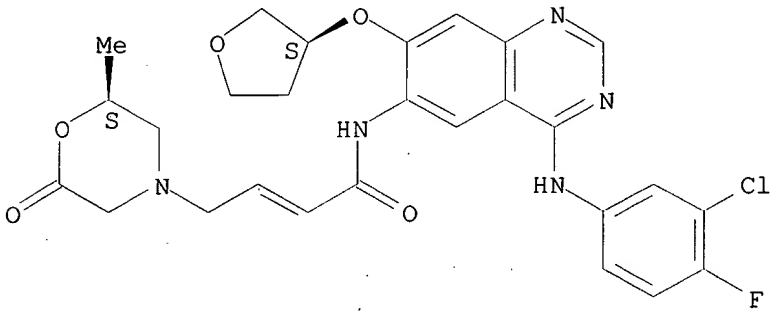
RN 402855-56-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



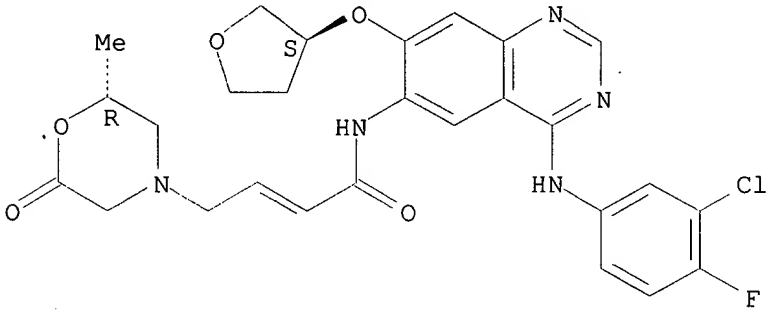
RN 402855-57-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



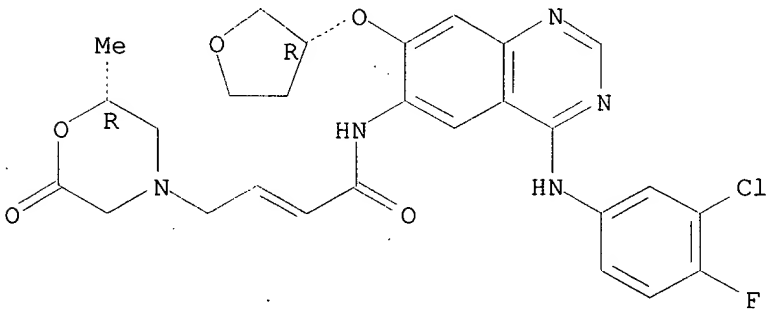
RN 402855-58-7 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

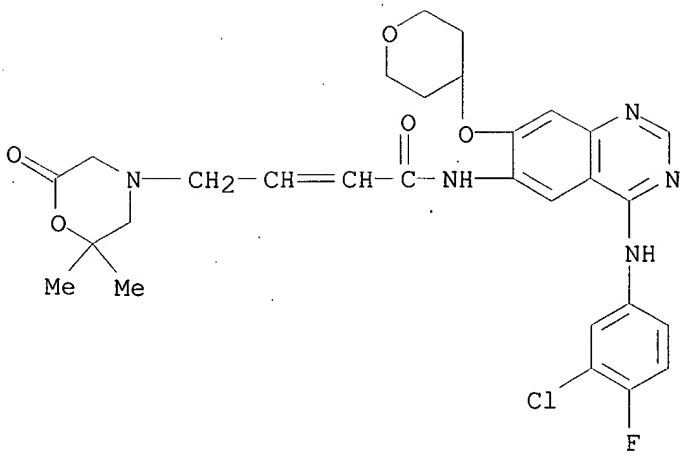


RN 402855-59-8 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

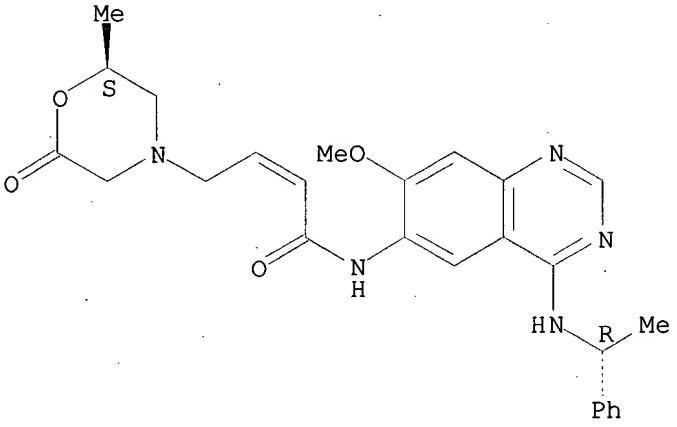


RN 402855-60-1 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)oxy]-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



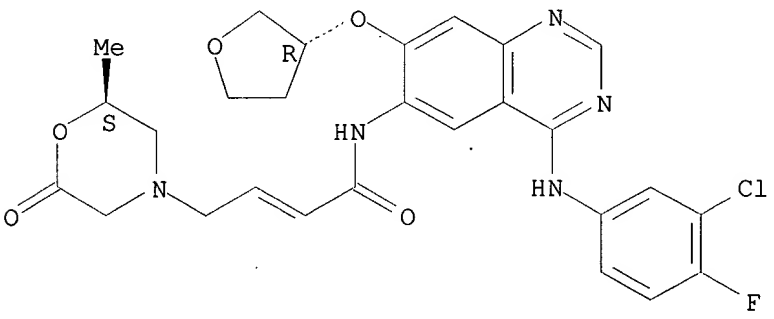
RN 402855-61-2 CAPLUS
CN 2-Butenamide, N-[7-methoxy-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



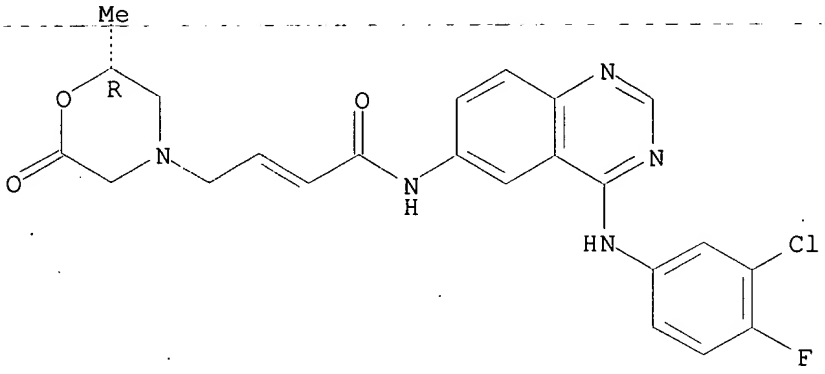
RN 402855-62-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



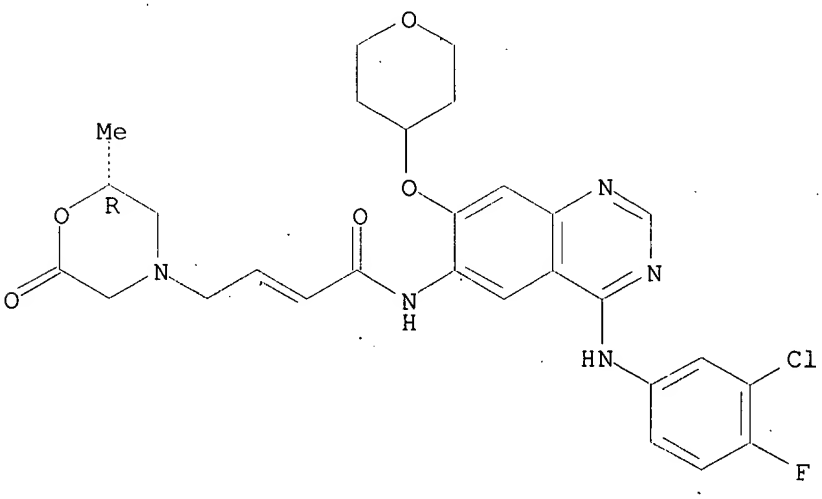
RN 402855-63-4 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



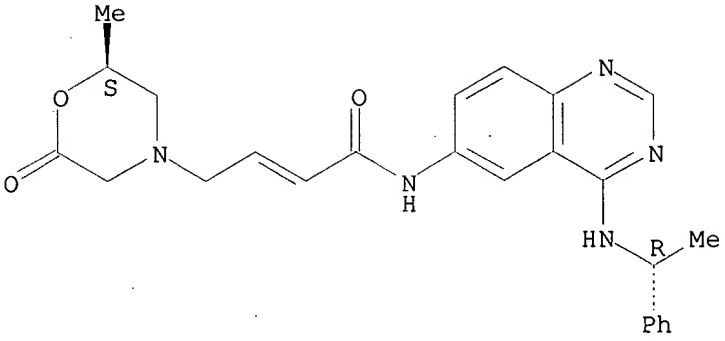
RN 402855-64-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



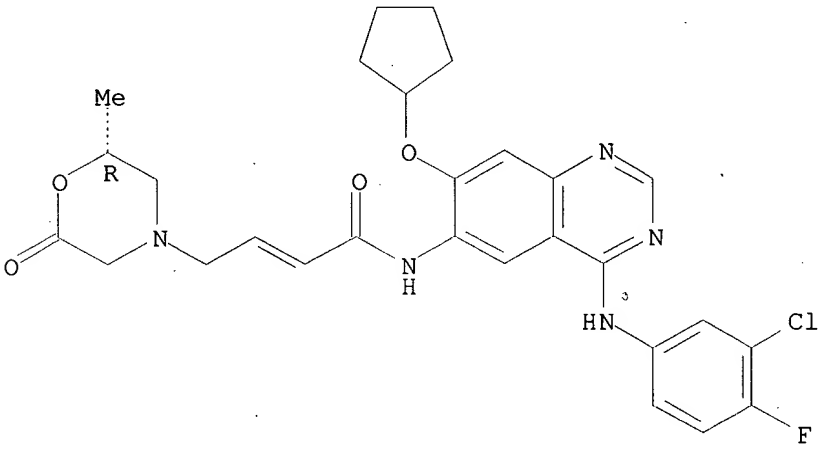
RN 402855-65-6 CAPLUS
CN 2-Butenamide, 4-[(2S)-2-methyl-6-oxo-4-morpholinyl]-N-[4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



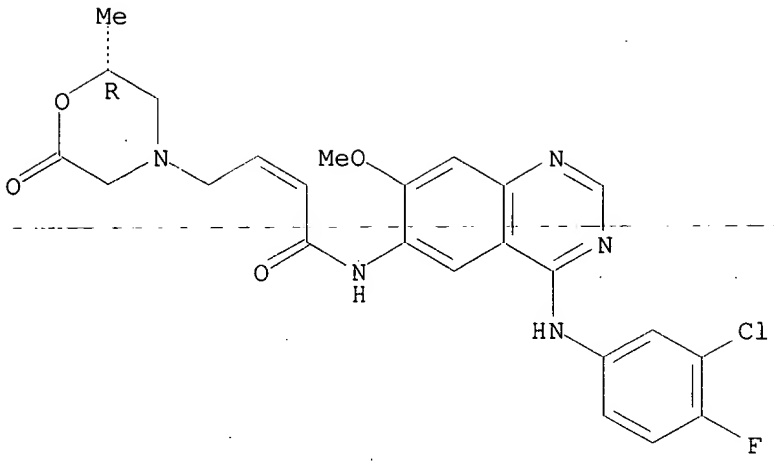
RN 402855-66-7 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



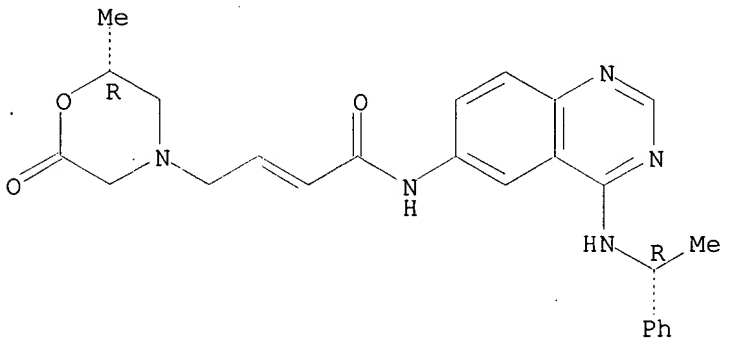
RN 402855-67-8 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



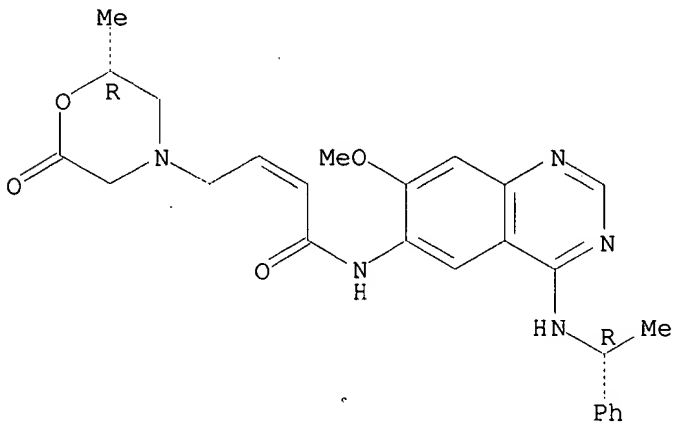
RN 402855-68-9 CAPLUS
CN 2-Butenamide, 4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-N-[4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-69-0 CAPLUS
CN 2-Butenamide, N-[7-methoxy-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

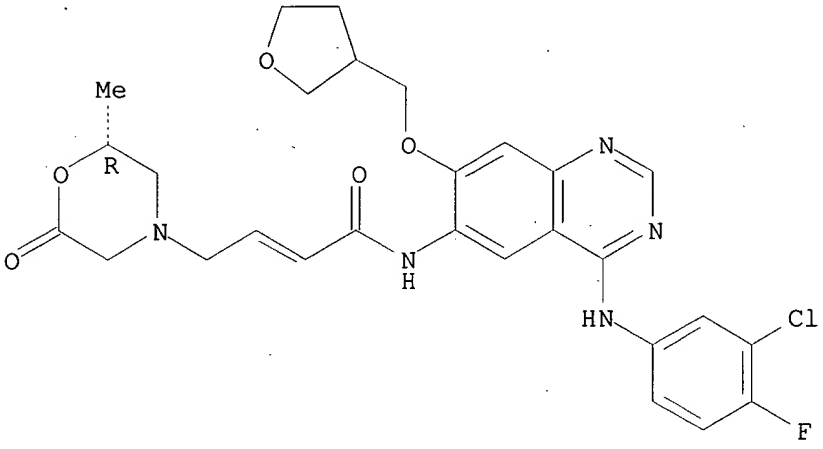
Absolute stereochemistry.
Double bond geometry unknown.



Searched by Barb O'Bryen, STIC 308-4291

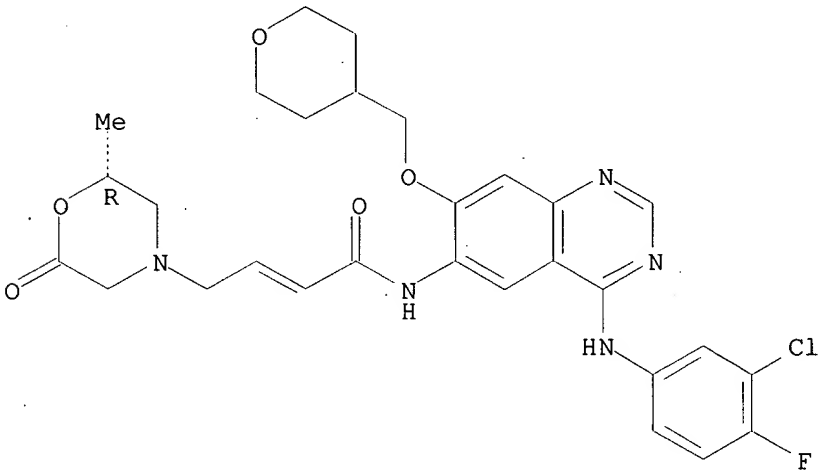
RN 402855-70-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



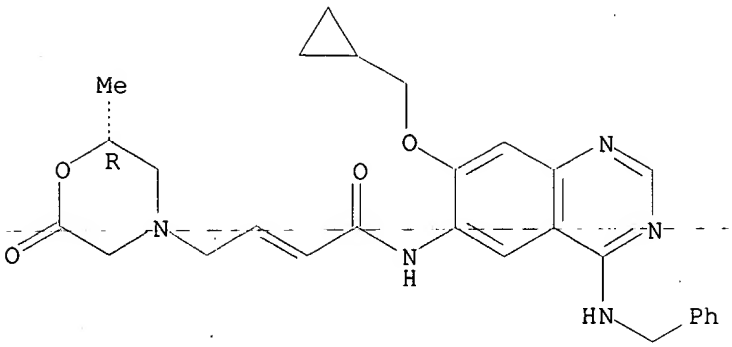
RN 402855-71-4 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



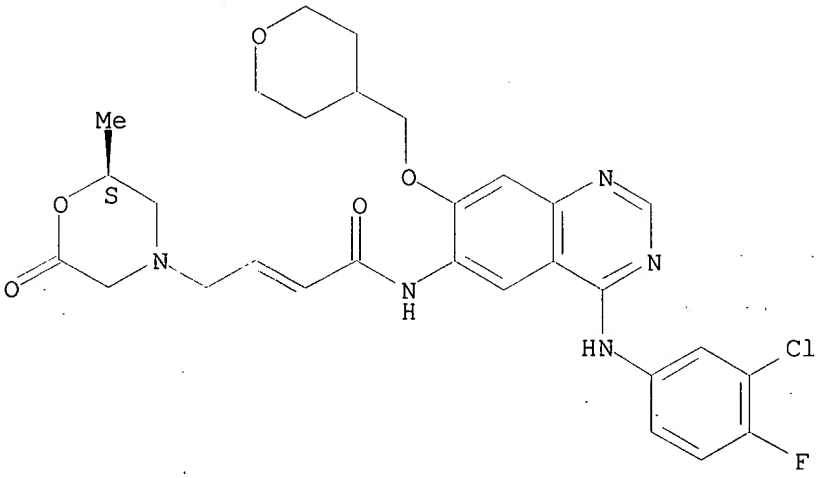
RN 402855-72-5 CAPLUS
CN 2-Butenamide, N-[7-(cyclopropylmethoxy)-4-[(phenylmethyl)amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-73-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:628125 CAPLUS
DOCUMENT NUMBER: 133:207919
TITLE: Preparation of 4-amino-quinazoline and quinoline derivatives having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Metz, Thomas; Solca, Flavio; Blech, Stefan
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany
SOURCE: PCT Int. Appl., 232 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
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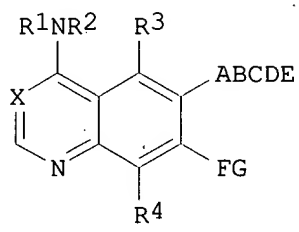
JP 2002538145	T2	20021112	JP 2000-602218	20000224
EE 200100449	A	20021216	EE 2001-449	20000224
BG 105765	A	20020329	BG 2001-105765	20010801
NO 2001004114	A	20011015	NO 2001-4114	20010824

PRIORITY APPLN. INFO.:
DE 1999-19908567 A 19990227
DE 1999-19911366 A 19990315
DE 1999-19928306 A 19990621
US 1999-149329P P 19990817
DE 1999-19954816 A 19991113
WO 2000-EP1496 W 20000224

OTHER SOURCE(S): MARPAT 133:207919

GI



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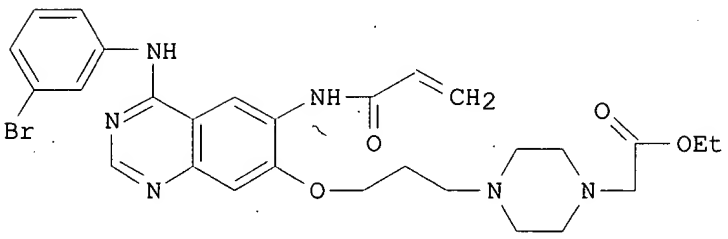


II

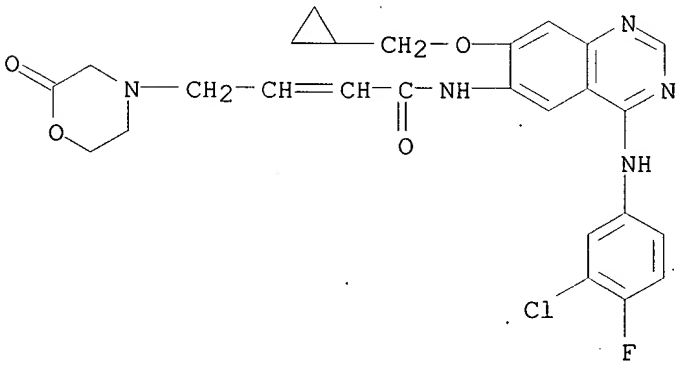
AB Title compds. [I; R1 = H, C1-C4-alkyl; R2 = (un)substituted Ph, benzyl, 1-phenylethyl; R3, R4 independently = H, F, Cl, CH3O, CH3OCH2, (CH3)2NCH2, (CH3CH2)2NCH2, pyrrolidino, piperidino, morpholino; X = C(CN), N; A = O, NH, (C1-C4)-alkylN; B = CO, SO2; C = 1,3-allenylene, 1,1-vinylene, 1,2-vinylene, 1,3-butadien-1,4-ylene, with CH3, CF3 substitution; D = alkylene, CO-alkylene, SO2-alkylene; CO, SO2; E = HOCO(CH2)nNR5, (HO)2P(:O)(CH2)nNR5; n = 1-6; R5 = H, alkyl], tautomers, stereoisomers, and physiol. acceptable salts are prepd. and having valuable pharmacol. properties, particularly an inhibiting effect on signal transduction mediated by tyrosine kinases. Title compds. are useful for treating tumoral diseases, diseases of the lungs and respiratory tract. Thus, the title compd. II was prepd. and tested by Cell Titer 96TM Aq. Nonradioactive Cell Proliferation Assay.

IT **290302-25-9P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN 290302-25-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

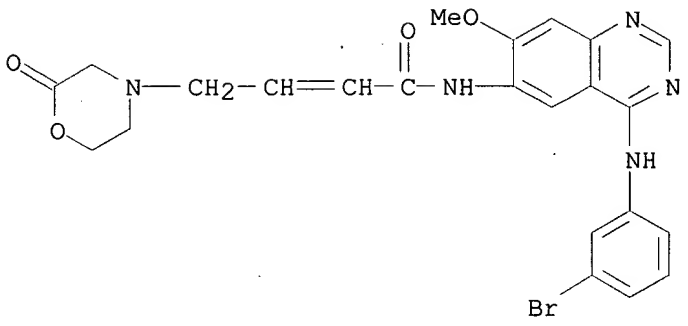


IT **290301-98-3P 290302-51-1P 290302-53-3P 290303-02-5P 290303-03-6P**

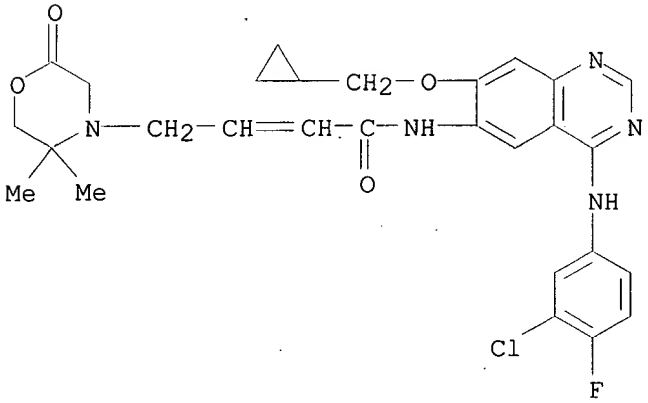
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

RN 290301-98-3 CAPLUS

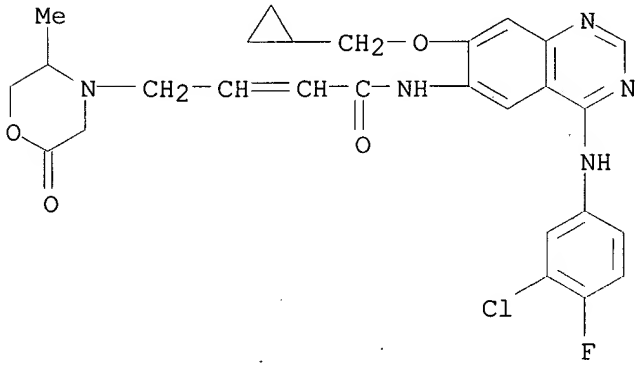
CN 2-Butenamide, N-[4-[(3-bromophenyl)amino]-7-methoxy-6-quinazolinyl]-4-(2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



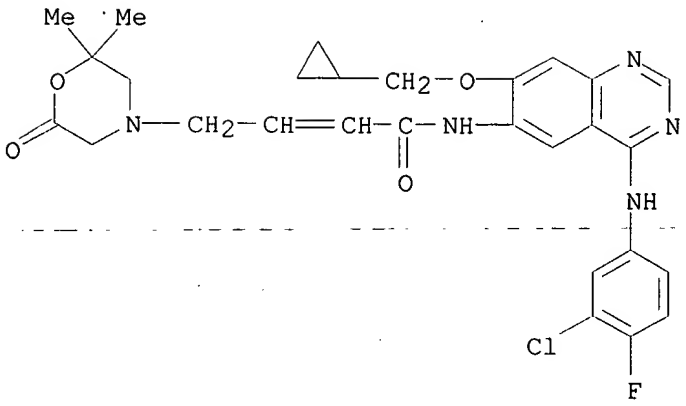
RN 290302-51-1 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 290302-53-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-methyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

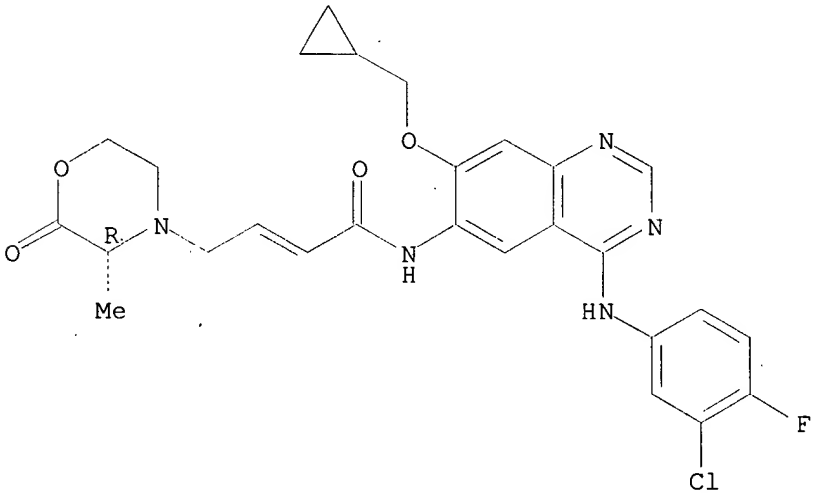


RN 290303-02-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 290303-03-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(3R)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 4 OF 5 USPATFULL
ACCESSION NUMBER: 2002:214287 USPATFULL
TITLE: Aminoquinazolines which inhibit signal transduction mediated by tyrosine kinases
INVENTOR(S): Himmelsbach, Frank, Mittelbiberach, GERMANY, FEDERAL REPUBLIC OF
Langkopf, Elke, Warthausen, GERMANY, FEDERAL REPUBLIC OF
Jung, Birgit, Schwabenheim, GERMANY, FEDERAL REPUBLIC OF
Blech, Stefan, Warthausen, GERMANY, FEDERAL REPUBLIC OF
Solca, Flavio, Wien, AUSTRIA

NUMBER	KIND	DATE

Searched by Barb O'Bryen, STIC 308-4291

PATENT INFORMATION: US 2002115675 A1 20020822
APPLICATION INFO.: US 2001-934631 A1 20010822 (9)
the application

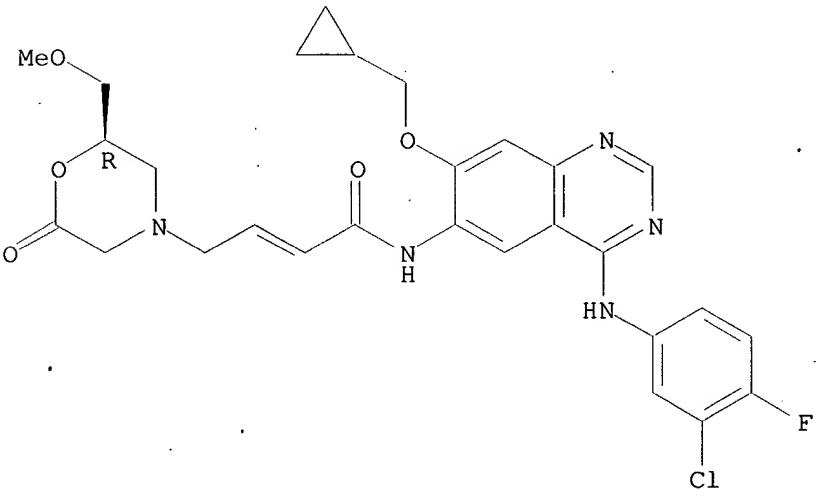
	NUMBER	DATE
PRIORITY INFORMATION:	DE 2000-DE10042062	20000826
	US 2000-230542P	20000905 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BOEHRINGER INGELHEIM CORPORATION, 900 RIDGEBURY ROAD, P. O. BOX 368, RIDGEFIELD, CT, 06877
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 1172
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds of the formula ##STR1##

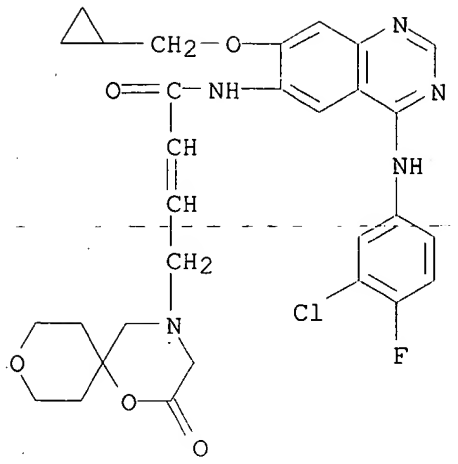
having an inhibitory effect on signal transduction mediated by tyrosine kinases, and the use thereof for treating diseases, particularly tumoral diseases, diseases of the lungs and respiratory tract.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **402569-98-6P 402569-99-7P 402570-00-7P 402570-01-8P**
(prepn. of (amino)(heterocyclylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)
RN 402569-98-6 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

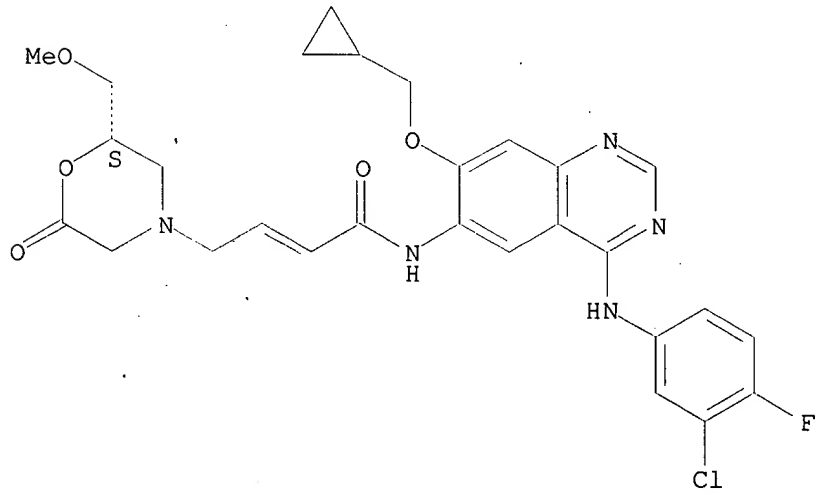


RN 402569-99-7 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-1,9-dioxa-4-azaspiro[5.5]undec-4-yl)- (9CI) (CA INDEX NAME)

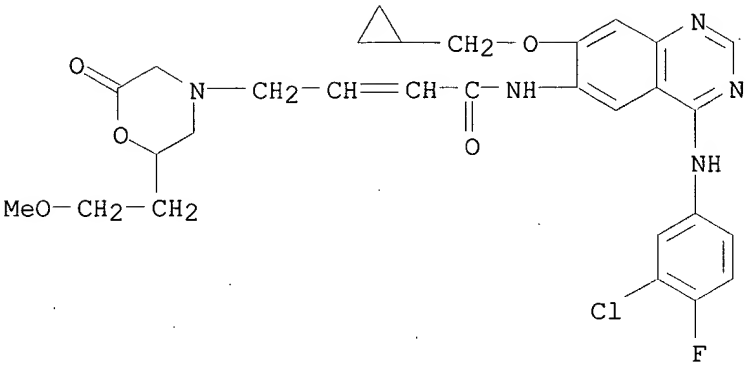


RN 402570-00-7 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402570-01-8 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[2-(2-methoxyethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)



L34 ANSWER 5 OF 5 USPATFULL

ACCESSION NUMBER:	2002:149174 USPATFULL
TITLE:	Bicyclic heterocycles, pharmaceutical compositions containing them, their use, and processes for preparing them
INVENTOR(S):	Himmelsbach, Frank, Mittelbiberach, GERMANY, FEDERAL REPUBLIC OF Langkopf, Elke, Warthausen, GERMANY, FEDERAL REPUBLIC OF Jung, Birgit, Schwabenheim, GERMANY, FEDERAL REPUBLIC OF Blech, Stefan, Warthausen, GERMANY, FEDERAL REPUBLIC OF Solca, Flavio, Wien, AUSTRIA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077330	A1	20020620
APPLICATION INFO.:	US 2001-929931	A1	20010815 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2000-10042060	20000826
	US 2000-230389P	20000906 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	BOEHRINGER INGELHEIM CORPORATION, 900 RIDGEBURY ROAD, P. O. BOX 368, RIDGEFIELD, CT, 06877
NUMBER OF CLAIMS:	9
EXEMPLARY CLAIM:	1
LINE COUNT:	1732

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A compound of formula (I) ##STR1##

wherein:

R.sub.a is a benzyl or 1-phenylethyl group or a phenyl group substituted by the groups R.sub.1 and R.sub.2, wherein:

R.sub.1 is a hydrogen, fluorine, chlorine, or bromine atom, or a methyl, trifluoromethyl, cyano, or ethynyl group, and

R.sub.2 is a hydrogen or fluorine atom;

R.sub.b is an R.sub.3O--CO--CH.sub.2--N--CH.sub.2--CH.sub.2--OH group optionally substituted at the methylene groups by 1 or 2 methyl or ethyl groups, wherein R.sub.3 is a hydrogen atom or a C.sub.1-4-alkyl group, a

2-oxomorpholin-4-yl group optionally substituted by 1 or 2 methyl or ethyl groups, or a N-[(1,3-dioxolan-2-yl)methyl]methylamino group;

R.sub.c is a hydrogen atom, or a methoxy, ethoxy, 2-methoxyethoxy, 2-ethoxyethoxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, or tetrahydropyranylmethoxy group; and

n is 1, 2, or 3, the tautomers, stereoisomers, and salts thereof, particularly the physiologically acceptable salts thereof with inorganic or organic acids or bases which have valuable pharmacological properties, their use in the treatment of diseases, especially tumoral diseases and diseases of the lungs and airways, and the preparation thereof.

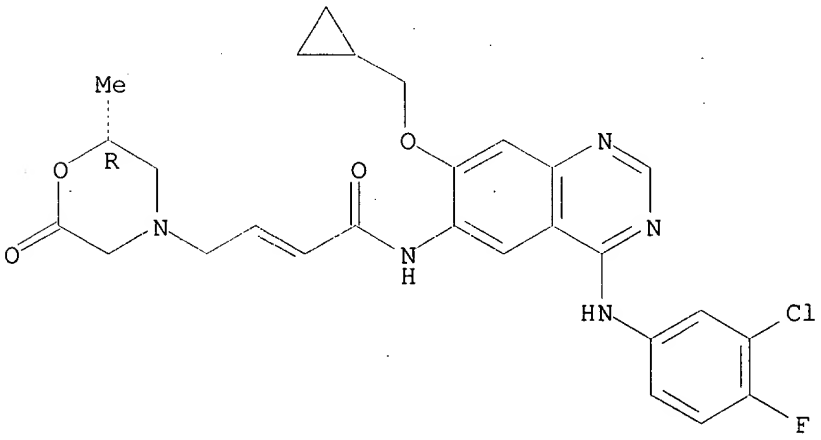
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **402855-53-2P**
(prepn. of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402855-53-2 USPATFULL

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

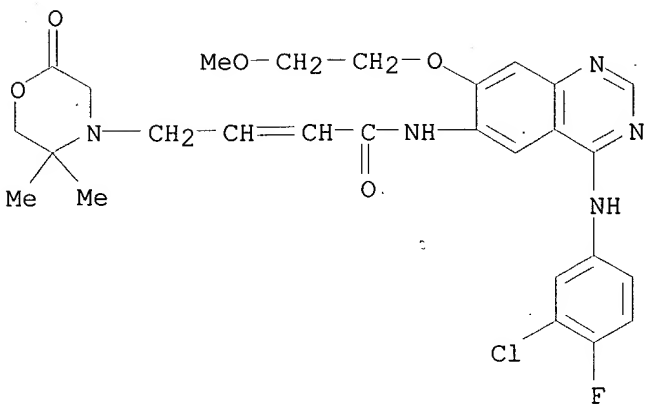


IT **402855-19-0P 402855-22-5P 402855-23-6P**
402855-24-7P 402855-25-8P 402855-29-2P
402855-30-5P 402855-32-7P 402855-33-8P
402855-34-9P 402855-35-0P 402855-38-3P
402855-47-4P 402855-48-5P 402855-52-1P
402855-54-3P 402855-55-4P 402855-56-5P
402855-57-6P 402855-58-7P 402855-59-8P
402855-60-1P 402855-61-2P 402855-62-3P
402855-63-4P 402855-64-5P 402855-65-6P
402855-66-7P 402855-67-8P 402855-68-9P
402855-69-0P 402855-70-3P 402855-71-4P
402855-72-5P 402855-73-6P
(prepn. of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

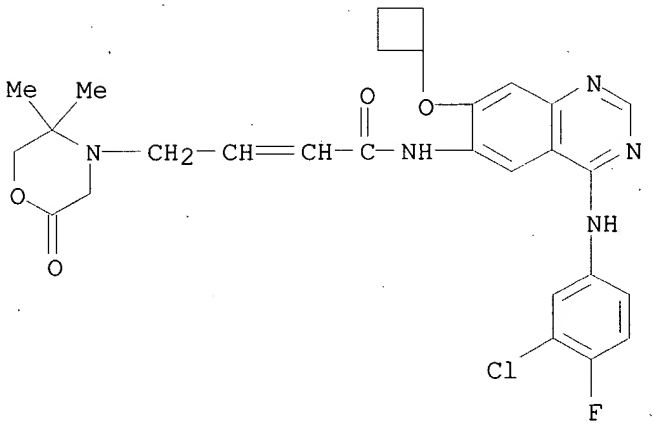
RN 402855-19-0 USPATFULL

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(2-methoxyethoxy)-6-

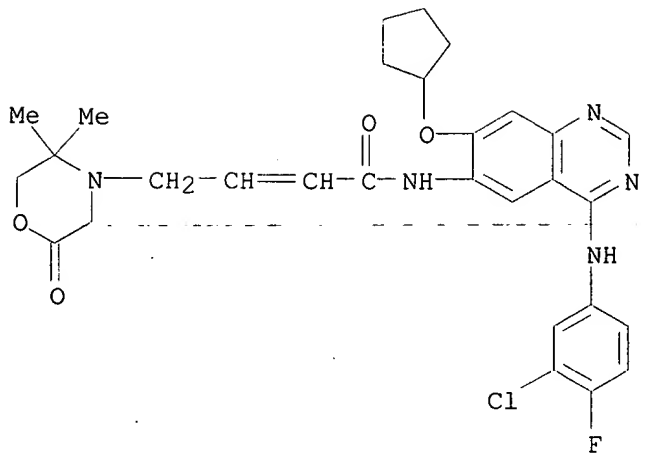
quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 402855-22-5 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

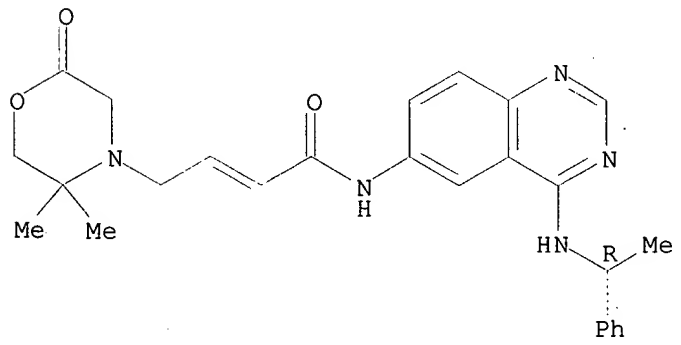


RN 402855-23-6 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



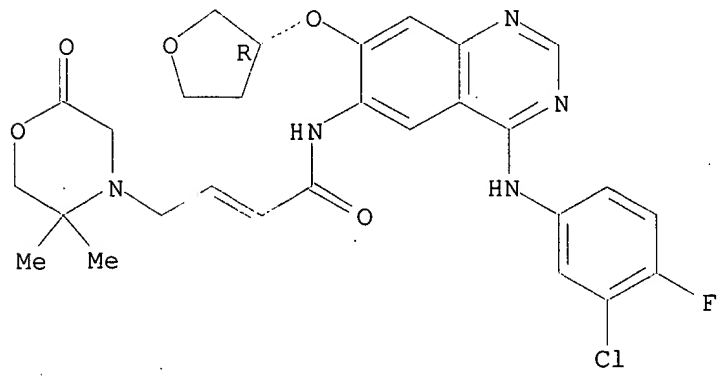
RN 402855-24-7 USPATFULL
CN 2-Butenamide, 4-(5,5-dimethyl-2-oxo-4-morpholinyl)-N-[4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

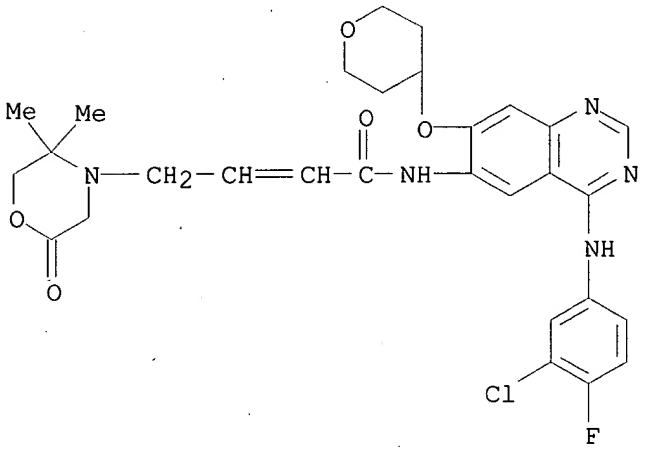


RN 402855-25-8 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

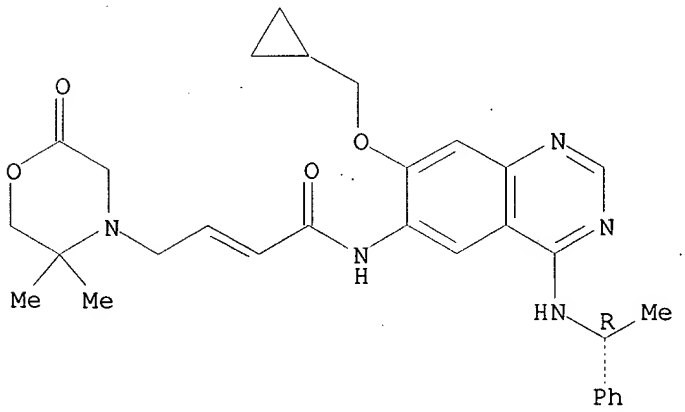


RN 402855-29-2 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

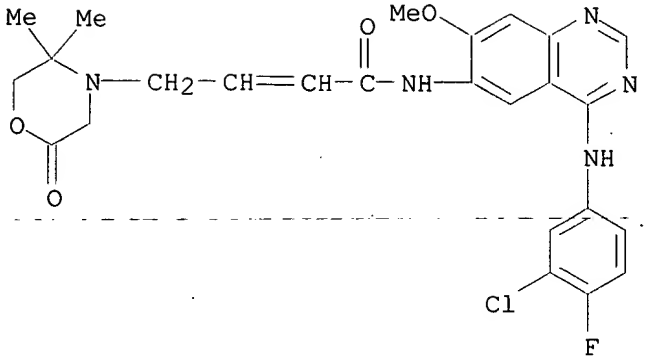


RN 402855-30-5 USPATFULL
CN 2-Butenamide, N-[7-(cyclopropylmethoxy)-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

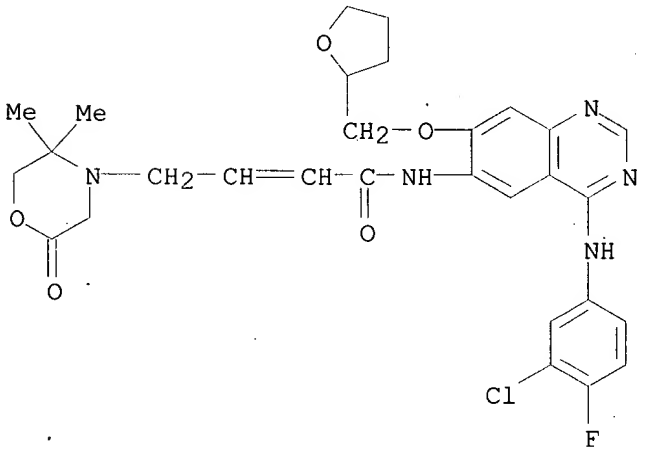
Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-32-7 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

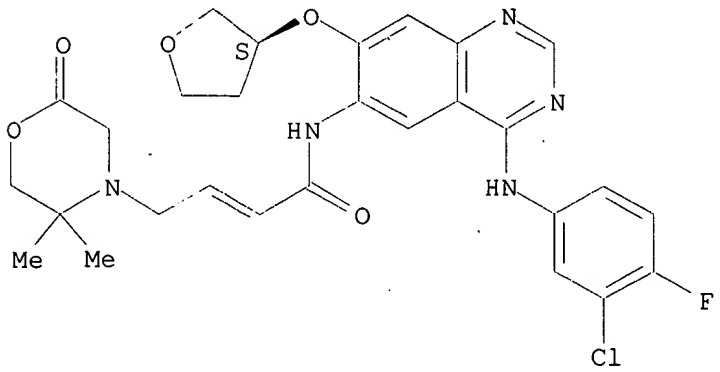


RN 402855-33-8 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2-furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

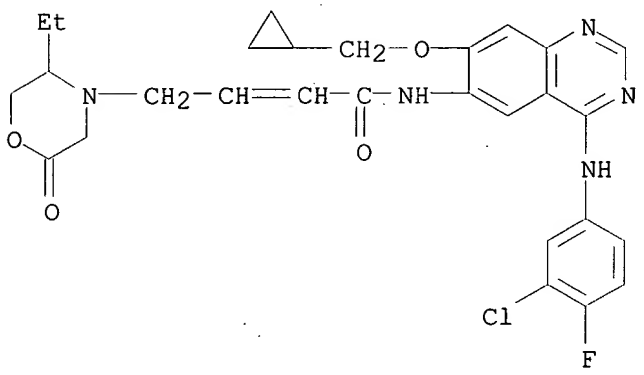


RN 402855-34-9 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

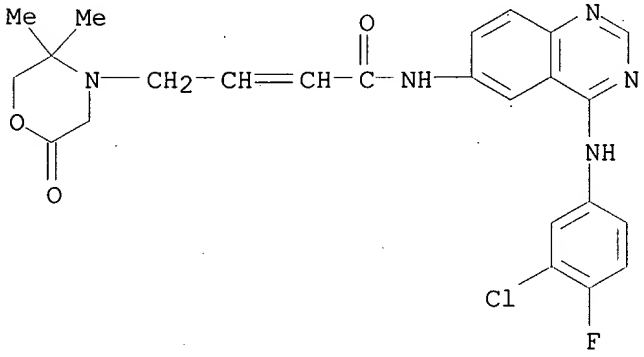
Absolute stereochemistry.
Double bond geometry unknown.



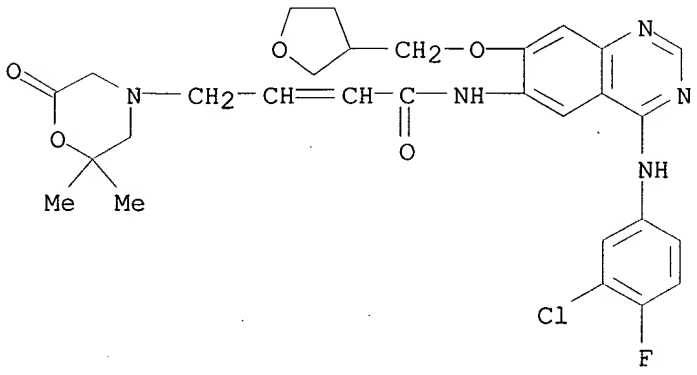
RN 402855-35-0 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-ethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 402855-38-3 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

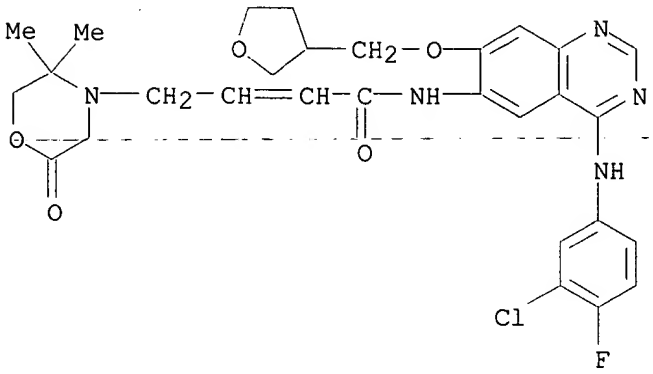


RN 402855-47-4 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



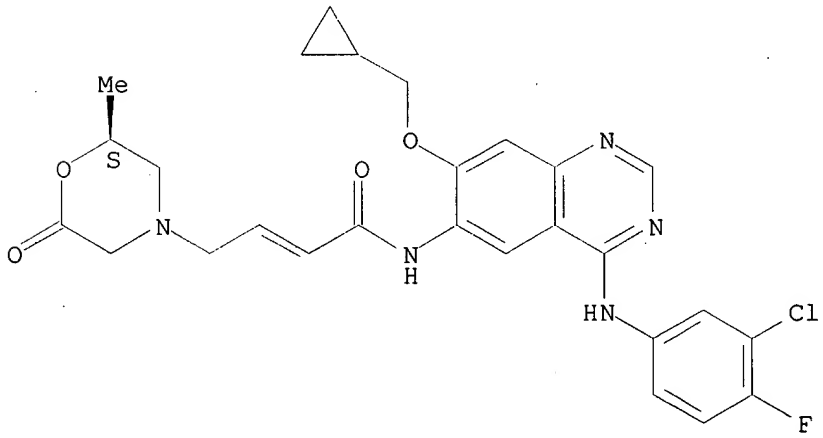
RN 402855-48-5 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-

furanyl)methoxy]-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)-
(9CI) (CA INDEX NAME)



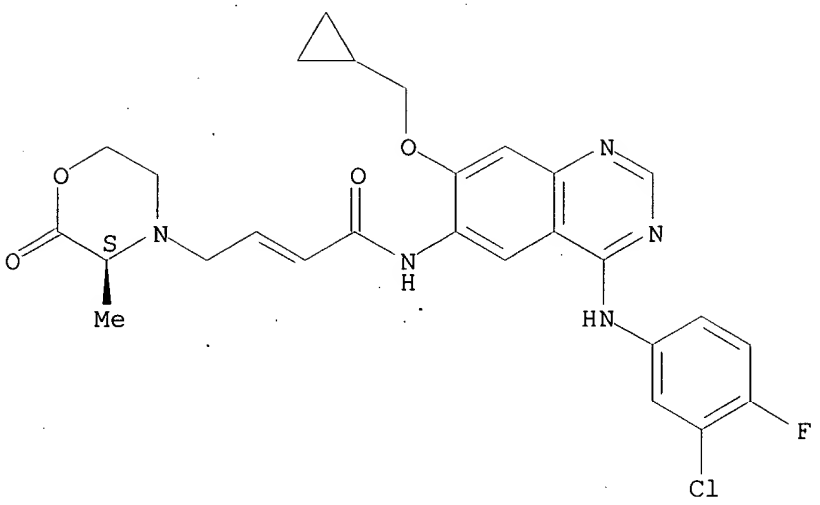
RN 402855-52-1 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-
6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX
NAME)

Absolute stereochemistry.
Double bond geometry unknown.



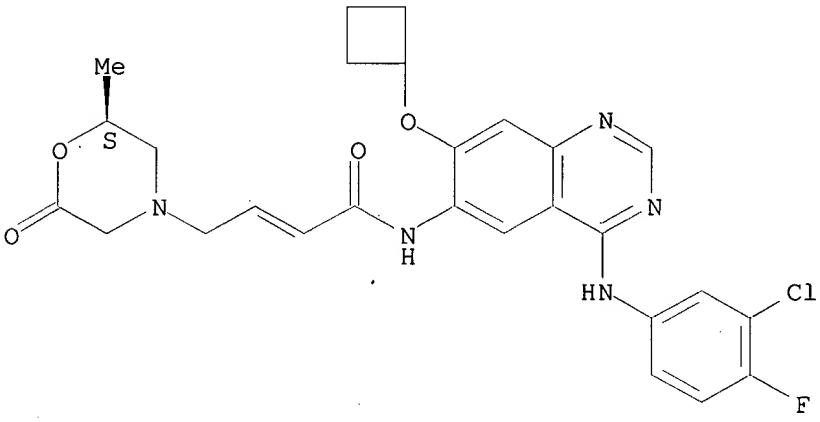
RN 402855-54-3 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-
6-quinazolinyl]-4-[(3S)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX
NAME)

Absolute stereochemistry.
Double bond geometry unknown.



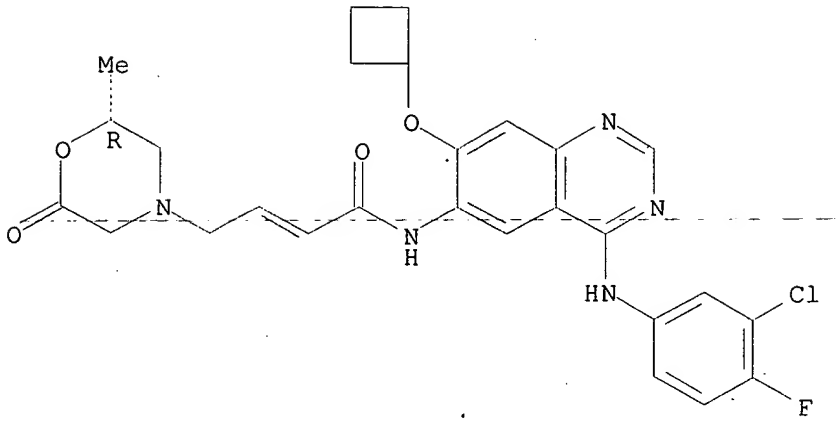
RN 402855-55-4 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



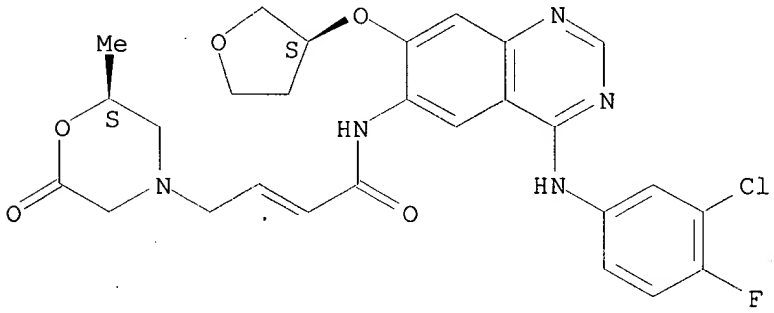
RN 402855-56-5 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



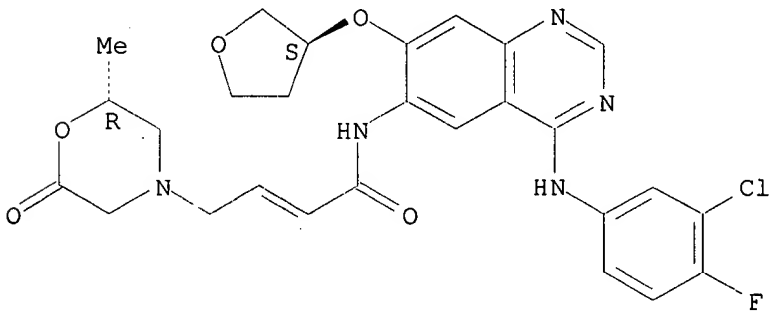
RN 402855-57-6 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-58-7 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

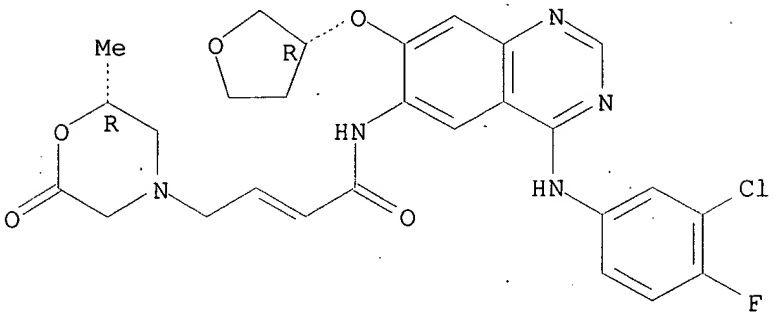
Absolute stereochemistry.
Double bond geometry unknown.



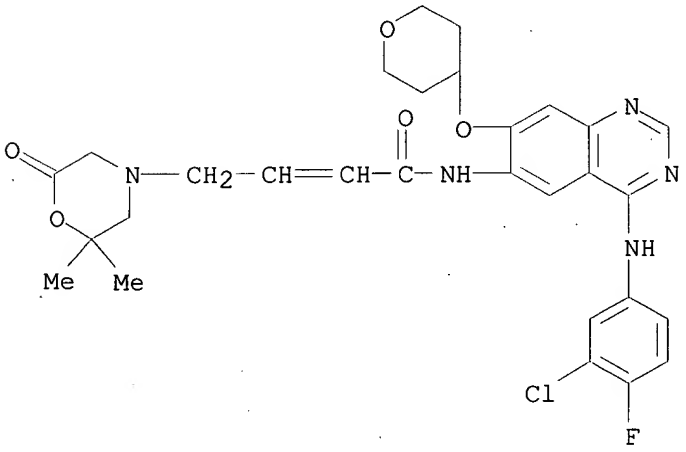
RN 402855-59-8 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-

(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

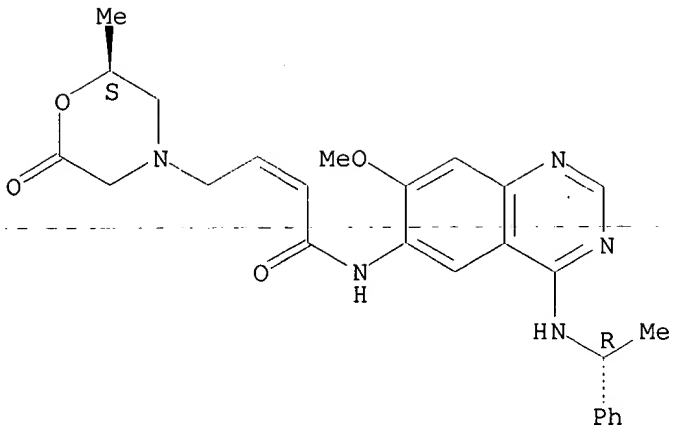


RN 402855-60-1 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)oxy]-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



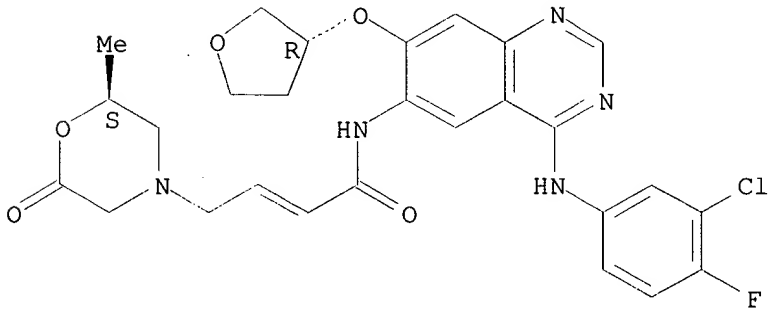
RN 402855-61-2 USPATFULL
CN 2-Butenamide, N-[7-methoxy-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



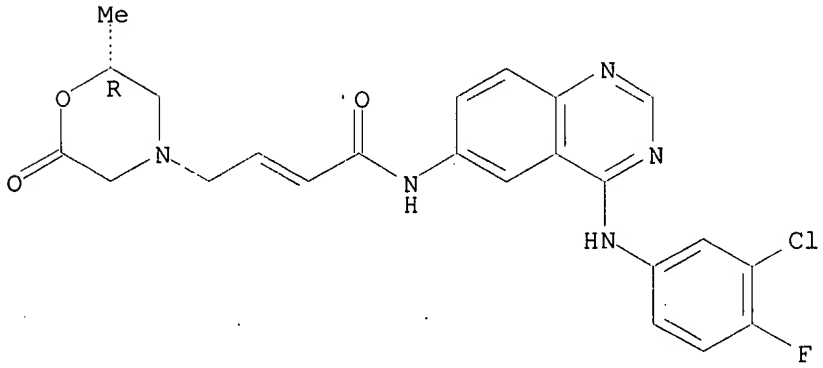
RN 402855-62-3 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-63-4 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

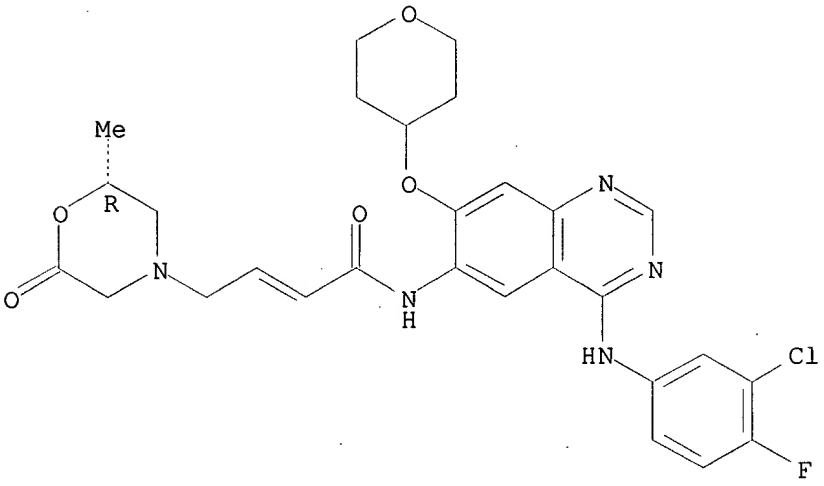
Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-64-5 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-

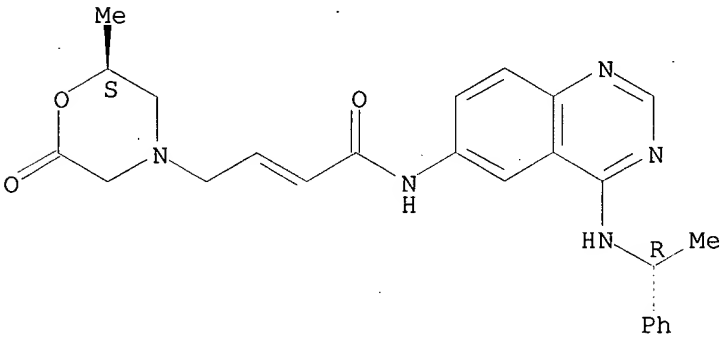
pyran-4-yl)oxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



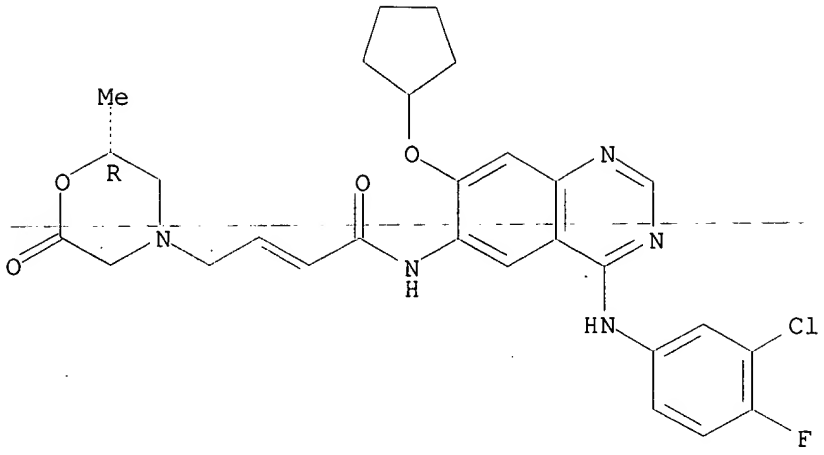
RN 402855-65-6 USPATFULL
CN 2-Butenamide, 4-[(2S)-2-methyl-6-oxo-4-morpholinyl]-N-[4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



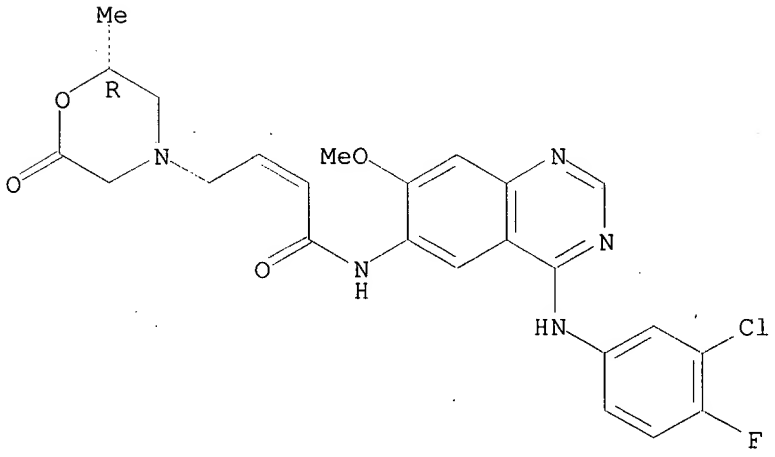
RN 402855-66-7 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



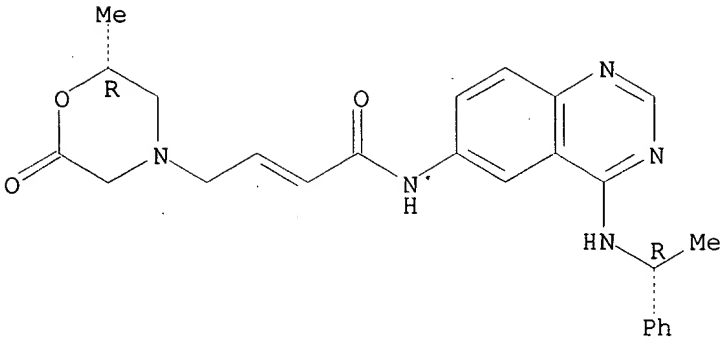
RN 402855-67-8 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



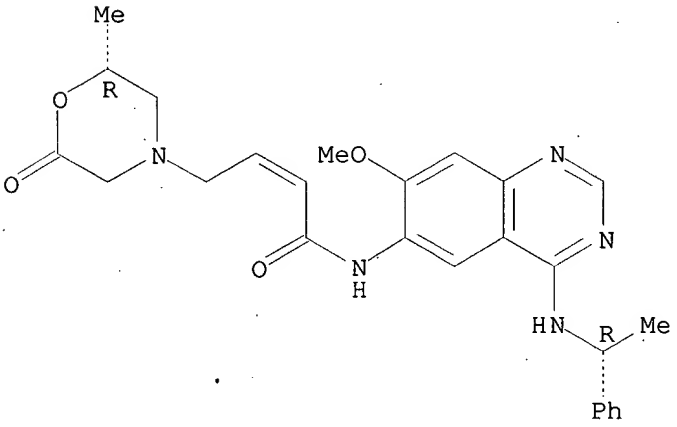
RN 402855-68-9 USPATFULL
CN 2-Butenamide, 4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-N-[4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



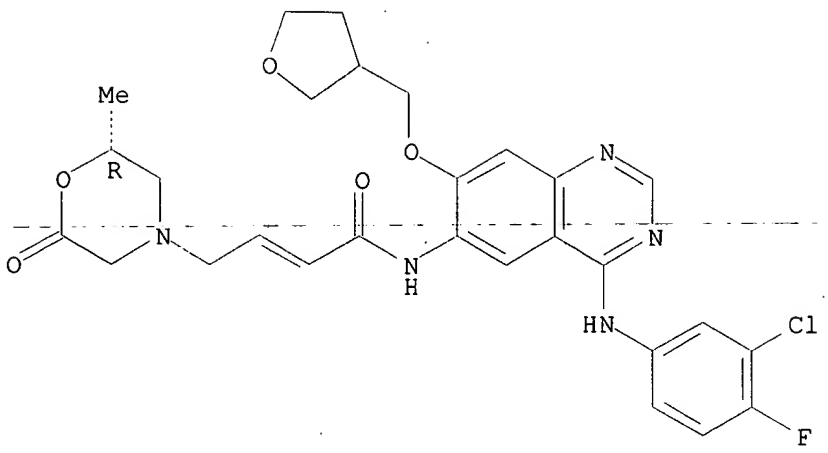
RN 402855-69-0 USPATFULL
CN 2-Butenamide, N-[7-methoxy-4-[[(1R)-1-phenylethyl]amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



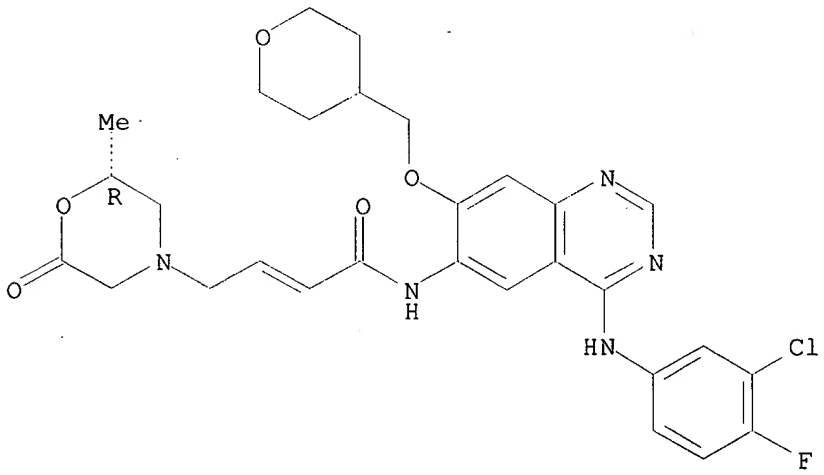
RN 402855-70-3 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-3-furanyl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



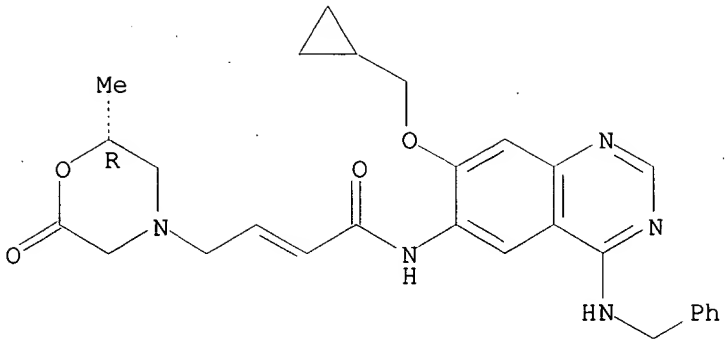
RN 402855-71-4 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



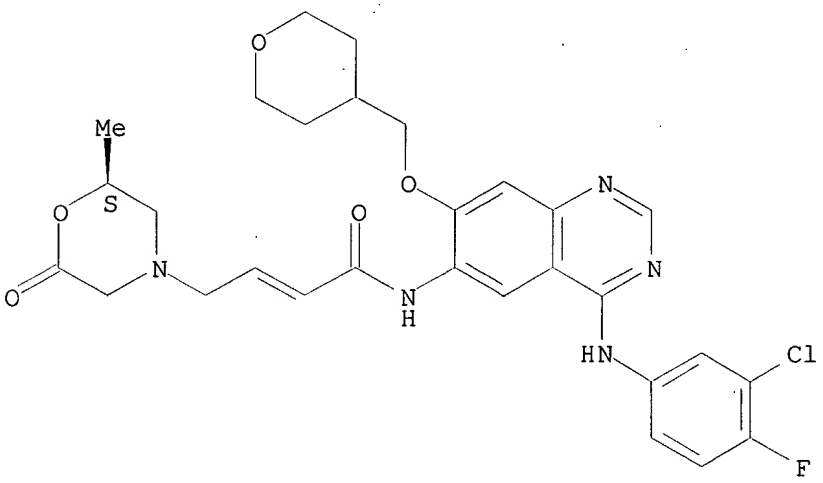
RN 402855-72-5 USPATFULL
CN 2-Butenamide, N-[7-(cyclopropylmethoxy)-4-[(phenylmethyl)amino]-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402855-73-6 USPATFULL
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



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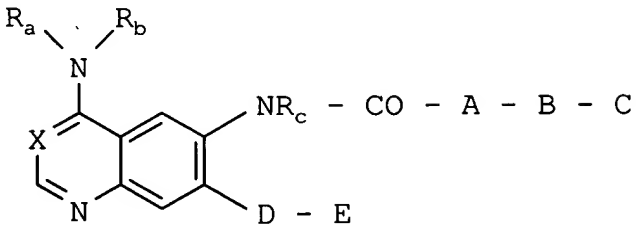
Whati is claimed is:

1. A compound of the formula



, (I)

wherein

R_a denotes a hydrogen atom or a methyl group,

R_b denotes a phenyl, benzyl- or 1-phenylethyl group wherein the phenyl nucleus is substituted in each case by the groups R_1 to R_3, while

R_1 and R_2, which may be identical or different, in each case denote a hydrogen, fluorine, chlorine, bromine or iodine atom,

a methyl, ethyl, hydroxy, methoxy, ethoxy, amino, cyano, vinyl or ethynyl group,

an aryl, aryloxy, arylmethyl or arylmethoxy group,

a methyl or methoxy group substituted by 1 to 3 fluorine atoms or

R_1 together with R_2, if they are bound to adjacent carbon atoms, denote a -CH=CH-CH=CH, -CH=CH-NH- or -CH=N-NH group and

R_3 denotes a hydrogen, fluorine, chlorine or bromine atom,

R_c denotes a hydrogen atom or a methyl group,

X denotes a methyne group substituted by a cyano group or a nitrogen atom,

A denotes a 1,1- or 1,2-vinylene group which may be substituted in each case by one or two methyl groups or by a trifluoromethyl group,

an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

B denotes an alkylene or -CO-alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking of the -CO-alkylene group to the adjacent group A in each case must take place via the carbonyl group,

a -CO-O-alkylene- or -CO-NR_4-alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking to the adjacent group A in each case must take place via the carbonyl group, wherein

R_4 denotes a hydrogen atom or a methyl or ethyl group,

or a carbonyl group,

C denotes a 2-oxo-morpholin-4-yl group substituted by the group R_5 or by the group R_5 and a C_{1-4}-alkyl group, while

R_5 denotes a C_{3-4}-alkyl, hydroxy-C_{1-4}-alkyl, C_{1-4}-alkoxy-C_{1-4}-alkyl, di-(C_{1-4}-alkyl)-amino-C_{1-4}-alkyl, pyrrolidino-C_{1-4}-alkyl, piperidino-C_{1-4}-alkyl, morpholino-C_{1-4}-alkyl, 4-(C_{1-4}-alkyl)-piperazino-C_{1-4}-alkyl, C_{1-4}-alkylsulphanyl-C_{1-4}-alkyl, C_{1-4}-alkylsulphinyl-C_{1-4}-alkyl, C_{1-4}-alkylsulphonyl-C_{1-4}-alkyl, cyano-C_{1-4}-alkyl, C_{1-4}-alkoxycarbonyl-C_{1-4}-alkyl, aminocarbonyl-C_{1-4}-alkyl, C_{1-4}-alkyl-aminocarbonyl-C_{1-4}-alkyl, di-(C_{1-4}-alkyl)aminocarbonyl-C_{1-4}-alkyl, pyrrolidinocarbonyl-C_{1-4}-alkyl, piperidinocarbonyl-

C_{1-4}-alkyl, morpholinocarbonyl-C_{1-4}-alkyl or a 4-(C_{1-4}-alkyl)-piperazinocarbonyl-C_{1-4}-alkyl group,

a 2-oxo-morpholin-4-yl group substituted by two groups R_5, where R_5 is as hereinbefore defined and the two groups R_5 may be identical or different,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a $-(CH_2)_m$, $-CH_2-Y-CH_2$, $-CH_2-Y-CH_2-CH_2$, $-CH_2CH_2-Y-CH_2CH_2-$ or $-CH_2CH_2-Y-CH_2CH_2CH_2-$ bridge optionally substituted by one or two C_{1-2}-alkyl groups, while

m denotes the number 2, 3, 4, 5 or 6 and
Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C_{1-4}-alkylimino group,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a $-(CH_2)_n$, $-CH_2-Y-CH_2$, $-CH_2-Y-CH_2CH_2-$ or $-CH_2CH_2-Y-CH_2$-bridge, while

Y is as hereinbefore defined and
n denotes the number 2, 3 or 4,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 to 4 C_{1-2}-alkyl groups,

D denotes a -O-C_{1-6}-alkylene group, while the alkylene moiety is linked to the group E, or

an oxygen atom, while this may not be linked to a nitrogen atom of the group E, and

E denotes an amino group substituted by 2 C_{1-4}-alkyl groups, wherein the alkyl groups may be identical or different and each alkyl moiety may be substituted from the 2 position by a C_{1-4}-alkoxy or di-(C_{1-4}-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group,

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while in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group may be replaced in the 4 position by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C_{1-4}-alkyl)-imino group,

a 4- to 7-membered alkyleneimino group optionally substituted by 1 to 4 methyl groups,

a 6- to 7-membered alkyleneimino group optionally substituted by 1 or 2 methyl groups, wherein in each case a methylene group in the 4 position is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C_{1-4}-alkyl)-imino group,

an imidazolyl group optionally substituted by 1 to 3 methyl groups,

a C_{5-7}-cycloalkyl group, wherein a methylene group is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl or N-(C_{1-4}-alkyl)-imino group, or

D together with E denotes a hydrogen atom,

a C_{1-6}-alkoxy group optionally substituted from the 2 position by a hydroxy- or C_{1-4}-alkoxy group,

a C_{3-7}-cycloalkoxy- or C_{3-7}-cycloalkyl-C_{1-4}-alkoxy group,

or a group R_d, where

R_d denotes a C_{2-6}-alkoxy group which is substituted from the 2 position by a C_{4-7}-cycloalkoxy- or C_{3-7}- cycloalkyl-C_{1-3}-alkoxy group,

a C_{4-7}-cycloalkoxy- or C_{3-7}-cycloalkyl-C_{1-6}-alkoxy group wherein the cycloalkyl moiety in each case is substituted by a C_{1-4}-alkyl, C_{1-4}-alkoxy, di-(C_{1-4}-alkyl)-amino, pyrrolidino, piperidino, morpholino, piperazino, 4-(C_{1-2}-alkyl)-piperazino, C_{1-4}-alkoxy-C_{1-2}-alkyl, di-(C_{1-4}-alkyl)-amino-C_{1-2}-alkyl, pyrrolidino-C_{1-2}-alkyl, piperidino-C_{1-2}-alkyl, morpholino-

C_{1-2}-alkyl, piperazino-C_{1-2}-alkyl- or 4-(C_{1-2}-alkyl)-piperazino-C_{1-2}-alkyl group, while the abovementioned cycloalkyl moieties may additionally be substituted by a methyl or ethyl group,

while, unless otherwise stated, by the aryl moieties mentioned in the definition of the abovementioned groups is meant a phenyl group which may be mono- or disubstituted by R_6, while the substituents may be identical or different and

R_6 denotes a fluorine, chlorine, bromine or iodine atom, a C_{1-2}-alkyl, trifluoromethyl or C_{1-2}-alkoxy group, or

two groups R_6, if they are bound to adjacent carbon atoms, together represent a C_{3-4}-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

or a tautomer or salt thereof.

2. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a benzyl or 1-phenylethyl group or a phenyl group substituted by the groups R_1 and R_2, while

R_1 denotes a hydrogen, fluorine, chlorine or bromine atom, a methyl, trifluoromethyl, cyano or ethynyl group and
R_2 denotes a hydrogen or fluorine atom,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a C_{1-4}-alkylene group,

C denotes a 2-oxo-morpholin-4-yl group substituted by the group R_5 or by the group R_5 and a C_{1-4}-alkyl group, while

R_5 denotes a C_{3-4}-alkyl, C_{1-2}-alkoxy-C_{1-4}-alkyl, di-(C_{1-2}-alkyl)-amino-C_{1-4}-alkyl, pyrrolidino-C_{1-4}-alkyl, piperidino-C_{1-4}-alkyl, morpholino-C_{1-4}-alkyl, 4-(C_{1-2}-alkyl)-piperazino-C_{1-4}-alkyl, C_{1-2}-alkylsulphanyl-C_{1-4}-alkyl, C_{1-2}-alkylsulphinyl-C_{1-4}-alkyl, C_{1-2}-alkylsulphonyl-C_{1-4}-alkyl, cyano-C_{1-4}-alkyl, C_{1-2}-alkoxycarbonyl-C_{1-4}-alkyl, aminocarbonyl-C_{1-4}-alkyl, C_{1-2}-alkyl-aminocarbonyl-C_{1-4}-alkyl, di-(C_{1-2}-alkyl)-aminocarbonyl-C_{1-4}-alkyl, pyrrolidinocarbonyl-C_{1-4}-alkyl, piperidinocarbonyl-C_{1-4}-alkyl, morpholinocarbonyl-C_{1-4}-alkyl- or a 4-(C_{1-2}-alkyl)-piperazinocarbonyl-C_{1-4}-alkyl group,

a 2-oxo-morpholin-4-yl group substituted by two groups R_5, while R_5 is as hereinbefore defined and the two groups R_5 may be identical or different,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a -$(CH_2)_m$, -CH_2-Y-CH_2, -CH_2-Y-CH_2-CH_2- or -CH_2CH_2-Y-CH_2CH_2-bridge, while

m denotes the number 2, 3, 4 or 5 and
Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C_{1-2}-alkylimino group,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a -$(CH_2)_n$, -CH_2-Y-CH_2, -CH_2-Y-CH_2CH_2- or -CH_2CH_2-Y-CH_2-bridge, where

Y is as hereinbefore defined and
n denotes the number 2, 3 or 4,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 or 2 methyl or ethyl groups,

D denotes a -O-C_{1-4}-alkylene group, while the alkylene moiety is linked to the group E, and

E denotes a dimethylamino, diethylamino, pyrrolidino, piperidino, morpholino, 4-methyl-piperazino- or 4-ethyl-piperazino group or

D together with E denotes a hydrogen atom,

a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy or tetrahydropyranylmethoxy group,

a cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy or cyclohexylmethoxy group or

a group R_d, where

R_d denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

or a tautomer or salt thereof.

3. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a 1-phenylethyl, 3-methylphenyl, 3-chlorophenyl, 3-bromophenyl- or 3-chloro-4-fluorophenyl group,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, dimethylaminomethyl, dimethylaminoethyl, diethylaminomethyl, diethylaminoethyl, cyanomethyl or cyanoethyl group,

a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a $-CH_2CH_2$, $-CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2CH_2$, $-CH_2-O-CH_2CH_2$, $-CH_2-NCH_3-CH_2CH_2$, $-CH_2-NC_2H_5-CH_2CH_2$, $-CH_2CH_2-O-CH_2CH_2$, $-CH_2CH_2-NCH_3-CH_2CH_2-$ or $-CH_2CH_2-NC_2H_5-CH_2CH_2-$ bridge,

a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a $-CH_2CH_2CH_2$, $-CH_2CH_2CH_2CH_2$, $-CH_2-O-CH_2$, $-CH_2-NCH_3-CH_2$, $-CH_2-NC_2H_5-CH_2$, $-CH_2-O-CH_2CH_2$, $-CH_2-NCH_3-CH_2CH_2$, $-CH_2-NC_2H_5-CH_2CH_2$, $-CH_2CH_2-O-CH_2$, $-CH_2CH_2-NCH_3-CH_2-$ or $-CH_2CH_2-NC_2H_5-CH_2-$ bridge,

or, if D together with E denotes a group R_d, it may also denote a 2-oxo-morpholin-4-yl group which is substituted by 1 or 2 methyl groups, and

D together with E denotes a hydrogen atom,

a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy or tetrahydrofuranylmethoxy group,

a cyclobutyloxy, cyclopentyloxy, cyclopropylmethoxy, cyclobutylmethoxy or cyclopentylmethoxy group or

a group R_d, where

R_d denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

or a tautomer or salt thereof.

4. A compound of the formula I according to claim 1, wherein

R_a denotes a hydrogen atom,

R_b denotes a 3-chloro-4-fluorophenyl group,

R_c denotes a hydrogen atom,

X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl or methoxyethyl group, or

amount of a compound according claim 1, 2, 3, 4 or 5 or a pharmaceutically acceptable salt thereof.

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